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UNITED STATES DEPARTMENT OF AGRICULTURE

Agricultural Research

Western Region and the Agricultural

Experiment Stations of the Western States

Quality Characteristics of Cultivars and  
New Germplasm of Wheat Bred and Grown in the  
Western States1/

Thirty-Fifth Annual Report

of the

Western Wheat Quality Laboratory

1982 Crop 2/

WRU No. 5802-20050-002

G.L. Rubenthaler, H.C. Jeffers, J.S. Kitterman, P.L. Finney,  
A.D. Bettge, P.D. Anderson, M.L. Baldrige, and P.A. Sperry

Dec. 1983

- 1/ In cooperation with the Arizona, California, Idaho, Montana, Oregon, Utah, and Washington Agricultural Experiment Stations who developed and grew the experimental wheat selections studied.
- 2/ This is a Progress Report of cooperative investigations of the milling and baking characteristics of current commercial cultivars and new germplasm of wheat grown in the Western states. Interpretation of the data may be changed with further experimentation; therefore, data in this report are not for publication, display, or distribution without prior written approval of the Agricultural Research Service, USDA and the cooperating agencies concerned.







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Western Wheat Quality Laboratory  
1982 Crop

SUMMARY OF ACCOMPLISHMENTS

1. Evaluation for end-use milling and baking quality of 1743 experimental wheat crosses grown and harvested as the 1982 crop were made. The selections were submitted from the wheat breeding programs in the Western states. Analysis and evaluation were completed on about 331 selections from the 1983 crop. Test criteria used to determine acceptability were flour yield, protein, ash and color; cookie diameter; loaf volume and crumb score; dough mixing requirements and water absorption; Japanese sponge cake volume and texture; Udon noodle yield, texture, color and score; and some developed test for Middle-Eastern style flat breads. Many of these experimental selections were judged as having acceptable end-use quality fitting their market classes. This work is an integral part of the wheat improvement programs to assure release of good agronomic and high quality wheat varieties. Results of the analysis can be found in the tables of data in Nursery Codes #1 through #58. See the Index of Nurseries (Page viii) for nursery titles, locations, and breeders.
2. In addition, the evaluation of milling and baking properties were made on 2276 early generation selections from the wheat breeding programs that were grown in 1982. Studies included materials from snowmold, foot rot, dwarf smut, yield trial, and various crop management studies. 1061 (47%) of the experimental crosses were rated as having promise in overall quality characteristics. This material represents a new generation of experimental selections that are candidates for advancing and further testing to determine their desirability as possible commercial varieties. See Summary List of Early Generation Nurseries Evaluated on Page 16. No data is included.
3. In co-operation with a grant from the PNW Grains Council the milling and baking evaluation were made on 21 commercial composites representing the wheat crop (1982) of WA, OR, and ID. The data was used in their marketing brochures. See Nursery Code number 007 and 015.
4. In co-operation with the Montana Wheat Quality Council we assisted in the pilot milling and baking evaluation of 34 hard red winter and spring samples. The samples were advanced selections from the Montana wheat breeding program, which were candidates for commercial variety release following industry evaluation. See Nursery Code 016 for results. Similarly we collaborated with the Hard Red Winter Wheat Quality Council by baking evaluation of 17 hard red winter wheats. For these results see Nursery Code 021.



5. In co-operation with Nabisco, Inc. three of their standard cookie flours and three of their standard cracker flours were evaluated by our physical-chemical and baking methods in an effort to identify inherent properties that differ in Eastern and Western soft wheats that may relate to the poor cracker baking performance of Western soft white wheat. No conclusions could be drawn. Data is given in Nursery Code 001.
6. In co-operation with the USDA, ARS Western Regional Research Center, Albany, CA a group of the cultivar Yecora Rojo wheats grown under several regiments of irrigation with water from the Alamo and Colorado rivers were evaluated to determine the influence of salinity on end-use quality. See Nursery Code 022.
7. As in past years this Laboratory conducted the Pacific Northwest Grain Council Collaborative test, which is an industry wide effort to evaluate promising varietal selections for acceptable end-use quality. The project is partially funded by the Pacific Northwest Grains Council. Ten samples were pilot milled and flour distributed to 12 collaborators of the domestic and foreign milling and baking industry. Results were summarized and distributed as the 12 Annual Report in October/83. See Nursery Code number 050.
8. The effect of flour extraction rate, type and length of fermentation and baking conditions on relative bioavailability of zinc of five distinctly different Iranian flat breads and their unfermented doughs, was determined using weanling rats fed low (5.5 ppm) levels of dietary zinc. When breads rather than unfermented doughs were used for preparation of diets, with one exception, bioavailability of Zn significantly ( $P = 0.05$ ) improved. Rats on the barbari-bread-based diet showed the highest weight gain and femur zinc content. There was no significant difference in weight gain among rats on dough-based diets. High correlation of weight gain and femur zinc with feed intake and low or no correlation with fiber or ZN:phytate molar ratio of the diets was observed. (See Publication #1)
9. The effect of flour extraction (77% and 97%) rate, type and length of fermentation (yeast raised, sourdough and unleavened) and baking conditions (varying time and temperature) on relative bioavailability of magnesium of five distinctly different Iranian breads and their unfermented doughs (immediately after mixing) were determined using weanling rats fed low (19 mg/100 g diet) levels of dietary magnesium. Higher village bread intake although accompanied by higher fiber and phytate intake did not lower the bioavailability of magnesium. (See Publication #2)



10. Micro baking techniques were developed for making the four most popular Iranian breads: barbari, Lavash, taftoon, and sangak. Four U.S. wheat classes were tested for suitability in Iranian breads, using five wheat varieties and a western white composite. The soft white winter wheats produced the most desirable breads. The soft white spring wheat produced satisfactory bread, although finished breads were excessively brown. Hard red winter wheat was strong and too dark most of the time. Club wheat was weak, making dough handling difficult and bread texture porous. (See Publication #3)
11. The pasting properties of breadcrumb flour were modified by 20 and 36 hr. of germination and were related to the degree of crumb firmness measured over a 96-hr. storage period. Data indicated that insufficient or excess amylase activity increased crumb firmness and staling rate of bread. The amounts of soluble starch, amylose, and amylopectin increased with germination time and decreased in the crumb as the bread aged. Interchanging fractions of germinated and ungerminated material suggests simultaneous amylolytic and proteolytic activities. Thirty-six hours of germination modified the gluten fraction enough to prevent normal baking quality. Gluten from sound flour slightly improved loaf volume of the starch and water-solubles of the material germinated for 36 hr. Germination for 20 hr. improved bread-baking quality. (See Publication #4)
12. The effect of soda (sodium bicarbonate) as a leavening agent on pH, phytic acid hydrolysis and physical quality of a fermentation model system and two popular Middle Eastern breads, Iranian taftoon and Pakistani naan (Arabic) were studied. Supplementing 0.2 and 0.4% soda invariably decreased phytic acid hydrolysis. In sour starter supplemented dough, phytic acid was reduced by 82% after 3 hrs. However, when 0.4% soda and sour starter were added loss of phytic acid did not exceed 29%. Supplementing soda in taftoon and naan bred formula significantly lowered phytic acid hydrolysis during fermentation. Soda had no apparent improvement on physical quality of breads but increased the dough water absorption and lengthened the mixing time. (See Publication #5)
13. An experimental laboratory method was developed for Chinese steamed bread production by optimizing ingredient ratios to yield high quality breads. A laboratory cutter was designed to make equally sized buns. The method is highly reproducible. An evaluation system including physical and rheological testing is described. Twelve Pacific Northwest wheat varieties and a western white composite were very suitable for steamed bread production. Studies with Nugaines wheat flour at six levels of



flour protein showed the bread volume was highly correlated with flour protein level. Storing steamed bread for 48 hours made its crumb firmer and less desirable. Freezing was found to be the best storage temperature. Resteaming after 24 and 48 hours storage fully revived freshness and softness of the crumb regardless of storage temperature. Differential scanning calorimetry showed that all starch granules were completely gelatinized during steaming. (See Publication #6)

14. Intensive management expected to produce higher grain yields had resulted in occasional early lodging of soft white wheat (*Triticum aestivum* L.). Standing and lodged wheats were sampled in fields where lodging occurred before or during head emergence. Grain yield and test weight were determined and milling and baking characteristics of the grain evaluated. Lodged wheat yielded 1440 kg/ha less grain than standing wheat. Grain from lodged wheat averaged 6 kg/hl lower in test weight and had consistently lower milling scores. Slower feeding into the mill, lower flour yield, higher ash in the flour, and greater water absorption by the flour contributed to the lower milling score. Observed and corrected diameters of cookies baked from grain of lodged wheat were consistently smaller than those of cookies baked from grain of standing wheat. (See Publication #7)
15. An improved Falling Number method to estimate alpha-amylase in wheat flours was developed by adding a known increment of alpha-amylase to the standard Falling Number test for low-amylase samples or by substituting sound wheat flour for 6 g or more in the assay for high-amylase containing samples. In addition the revised methods (1) reduce Least Significant Difference by as much as 80% (2) reduce standard error by as much as 65-75% (3) reduce time required per assay determination by as much as 75% (4) improve tube cleaning while (5) materially reducing confounding effects that wheat varietal differences in pasting properties have on alpha-amylase estimation. (See Publication #9)
16. In cooperation with the Department of Nutrition and Food Sciences, Utah State University, the effects of some cheese production- and whey dehydration-procedures on the physico-chemical and breadmaking properties of various wheys were evaluated.
17. Biochemical, nutritive, rheological and rat- and human-feeding studies were conducted after developing a germinated multi-cereal (wheat, millet): multi-legume (sesame, mung and garbanzo) weaning food (cooperative studies with the Department of Human Nutrition, WSU. Masters Degree Work).

18. In cooperation with the Department of Human Nutrition (PhD Degree work) the effects of germination on pea phytic acid neutral detergent fiber, Ca and Zn content and Zn bioavailability were evaluated.
19. Studies were initiated to develop low water activity packaged white bread and to study the effect of various bread ingredients on staling rate and degree. (Grant support by USA NATICK R&D Laboratories)



## INDEX OF NURSERIES

NURS CODE	NURS ID	NURSERY NAME	LOCATION	BREED	NOSAM	BLABNO	SDATE	BRCO	COCO	CACO	NOCO	PBAR
001		NABISCO FLOURS	TOL. OH, CART. MO, CH. WA	L. F. JACKSON	6	820001	82200	1	1	1	1	9
002		CALIFORNIA REGIONAL WHEAT	SUTTER, KINGS CO., CA	L. F. JACKSON	63	820007	82223	1	0	0	0	9
003		SOFT WHITE WINTER YIELD TRIALS	POMEROY, WA	C. J. PETERSON	97	820070	82225	0	1	0	0	8
004		ADVANCED WHITE WINTER	MORO, OR	C. R. ROHDE	25	820167	82250	0	1	0	0	7
005		ADVANCED WHITE WINTER	PENDLETON, OR	C. R. ROHDE	25	820192	82250	0	1	0	0	9
006		YASUTO'S THESIS	PULLMAN, LIND WA	C. R. ROHDE	15	820217	82259	0	0	1	0	9
007		PNW CROP QUALITY SURVEY	OR, WA, ID	C. O. QUALSET	10	820232	82274	1	1	1	1	8
008		CALIFORNIA EXP. 210	DAVIS, CA	C. O. QUALSET	40	820242	82256	1	0	0	0	10
009		CALIFORNIA EXP. 212	DAVIS, CA	C. O. QUALSET	33	820282	82256	1	0	0	0	10
010		CALIFORNIA EXP. 213	DAVIS, CA	C. O. QUALSET	34	820315	82256	1	0	0	0	10
011		CALIFORNIA EXP. 214	DAVIS, CA	C. O. QUALSET	37	820349	82256	1	0	0	0	10
012		ADVANCED IRRIGATED WHITE WINTER	PENDLETON, OR	C. R. ROHDE	25	820386	82243	0	1	0	0	11
013		ADVANCED HARD RED WINTER	HEGLAR, ID	D. F. SUNDERMAN	11	820411	82232	1	0	0	0	12
014		ADVANCED IRRIGATED SPRING	ABERDEEN, ID	D. F. SUNDERMAN	8	820422	82232	1	1	1	0	11
015		PNW CROP QUALITY SURVEY	OR, WA, ID	C. O. QUALSET	11	820430	82274	1	1	1	1	8
016		MONTANA WHEAT QUALITY COUNCIL	BZ, HV, MC, SD, CN MONT.	MCNEAL & TAYLOR	34	820441	82274	1	0	0	0	13
017		ADVANCED SOFT WHITE	CUN, RLSP, PUL, HAR, LND	C. F. KONZAK	25	820475	82285	0	1	1	1	10
018		WESTERN REGIONAL HARD RED WINTER	PND, MOR, KAL, STL, HEG	C. F. KONZAK	28	820500	82235	1	0	0	0	10
019		WESTERN REGIONAL WHITE WINTER	POM, PEND, MORO, STLWTR	C. F. KONZAK	31	820528	82235	0	1	1	1	8
020		WESTERN GRAIN MARKETING	CA	D. SHERMAN	2	820559	82284	1	0	0	0	11
021		HARD WINTER WHEAT QUALITY COUNCIL	KS, TX, NE, OK, CARG.	D. SHERMAN	17	820561	82295	1	0	0	0	12
022		SALINE STRESSED WHEAT	CA	M. BEAN	18	820578	82302	1	0	0	0	11
023		SOFT WHITE PRELIMINARY YIELD TRIAL	CORVALLIS, OR	W. E. KRONSTAD	63	820596	82314	0	1	0	0	8
024		HARD RED ELITE	CORVALLIS, OR	W. E. KRONSTAD	10	820659	82314	1	0	0	0	9
025		SOFT WHITE ADVANCED YIELD TRIAL	CORVALLIS, OR	W. E. KRONSTAD	14	820669	82314	0	1	0	0	8
026		HARD RED ADVANCED YIELD TRIAL	CORVALLIS, OR	W. E. KRONSTAD	16	820683	82314	1	0	0	0	9
027		SOFT WHITE ELITE	CORVALLIS, OR	W. E. KRONSTAD	19	820699	82314	0	1	0	0	8
028		WESTERN REGIONAL HARD RED SPRING	ABD, KAL, R. S., MOR, PEN	W. E. KRONSTAD	10	820718	82314	1	0	0	0	12
029		WESTERN REGIONAL SOFT WHITE SPRING	ABD, KAL, R. S., MOR, PEN	W. E. KRONSTAD	22	820728	82285	0	1	1	1	10
030		HARD RED PRELIMINARY YIELD TRIAL (HRPYT)	CORVALLIS, OR	W. E. KRONSTAD	28	820750	82314	1	0	0	0	8
031		SINGLE SEED DESCENT PREL. Y. T. (SDPYT)	CORVALLIS, OR	W. E. KRONSTAD	21	820778	82314	0	1	0	0	8
032		HARD WHITE PREL. YIELD TRIAL (HWPYT)	CORVALLIS, OR	W. E. KRONSTAD	8	820799	82314	1	1	0	0	8
033		PRELIMINARY WINTER WHEAT	MORO, OR	C. R. ROHDE	25	820807	82314	1	1	0	0	9
034		PRELIMINARY WINTER WHEAT	PENDLETON, OR	C. R. ROHDE	18	820832	82314	1	1	0	0	11
035		HARD WHITE-WESTERN GRAIN MARKETING	CA	D. SHERMAN	7	820850	82319	1	0	0	0	10
036		JACQUOT CLUBS	HOOPER, WA	H. JACQUOT	12	820857	82326	0	1	1	0	6
037		ADVANCED CLUB YEILD TRIAL-EXP. 211	DAVIS, CA	C. O. QUALSET	26	820869	82319	0	1	0	0	10
038		PRELIMINARY CLUB YEILD TRIAL-EXP. 218	DAVIS, CA	C. O. QUALSET	40	820895	82319	0	1	0	0	9
039		TZPP*ANZA2-EXP. 222	DAVIS, CA	C. O. QUALSET	42	820935	82319	1	0	0	0	9
040		ANZA*CAJEME-EXP. 231	DAVIS, CA	C. O. QUALSET	22	820977	82319	1	0	0	0	10
041		COMMERCIAL SPRING VARIETIES	RS, CUN, PUL, & LIND, WA	C. F. KONZAK	36	820999	82336	1	1	0	0	12
042		ADVANCED SPRING WHEAT	PENDLETON, OR	C. R. ROHDE	20	821035	82334	1	1	0	0	11
043		ADVANCED SPRING WHEAT	MORO, OR	C. R. ROHDE	20	821055	82334	1	1	0	0	12
044		DUAL PURPOSE	R. S., PULLMAN, WA	C. F. KONZAK	13	821075	82344	1	1	0	0	11
045		HARD RED ADVANCED SPRING	CORVALLIS, OR	W. E. KRONSTAD	42	821088	82356	1	0	0	0	10
046		HARD RED ADVANCED SPRING	MORO/KASEBERG FARM	W. E. KRONSTAD	37	821130	82356	1	0	0	0	11
047		SOFT WHITE ADVANCED SPRING	CORVALLIS, OR	W. E. KRONSTAD	30	821167	82356	0	1	0	0	10
048		COMMON WHEAT	TULELAKE, CA	Y. P. PURI	20	821197	82351	1	0	0	0	11
049		ADVANCED SPRING WHEAT	PULLMAN, R. S. WA	C. F. KONZAK	24	821217	83033	1	1	1	1	11
050		PNW GRAIN COUNCIL COLLABORATIVE TESTS	LIND, PULL, ABD WA-ID	C. F. KONZAK	10	821241	83034	1	1	1	1	10

NURS CODE	NURS ID	NURSERY NAME	LOCATION	BREED	NOSAM	BLABNO	SDATE	BRCO	COCO	CACO	NOCO	PBAR
051		DRILL STRIPS	PULLMAN, LIND WA	E. DONALDSON	60	821251	83034	1	1	1	1	11
052		ACCESSION PEDEGREE	LIND, WA	E. DONALDSON	348	821311	83041	1	1	0	0	11
053		WESTERN REGIONAL & STATE HARD RED WINTER	LIND, H. HAV, WTRVL WA	E. DONALDSON	25	821659	83041	1	0	0	0	11
054		ADVANCED HARD RED WINTER I DRY EARLY	LIND, WA	E. DONALDSON	14	821684	83041	1	0	0	0	11
055		ADVANCED HARD RED WINTER II IRRIG LATE	LIND, WA	E. DONALDSON	31	821698	83041	1	1	0	0	12
056		ADVANCED HARD RED WINTER III DRY EARLY	LIND, WA	E. DONALDSON	8	821729	83041	1	0	0	0	12
057		CANADIAN SOFT SPRING WHEAT	CANADA	.	1	821737	83111	0	1	0	0	9
058		PROTEIN SERIES	LIND, WA	.	6	821738	83122	0	0	0	0	7

KEY : NOSAM = NUMBER OF SAMPLES      BLABNO = BEGINNING LAB NUMBER      SDATE = DATE SAMPLES RECEIVED

BRCO = BREAD CODE      COCO = COOKIE CODE      CACO = CAKE CODE      NOCO = NOODLE CODE      PBAR = NURSERY MEAN PROTEIN

## ABBREVIATION DESCRIPTION

We have implemented a computer program to store, calculate, and retrieve our milling and baking data. The following is a list of abbreviations used as column headings in the following tables of data.

NURSCO - Nursery Code Number (located upper left corner of table).  
 LABNUM - Laboratory Number (first two digits crop year).  
 VAR - Variety or selection name.  
 IDNO - CI or Selection Identification Number.  
 TWT - Test weight in lbs/bu.  
 FASH - Flour ash percent at 14% moisture basis.  
 FYELD - Percent of flour obtained.  
 MSCOR - Milling score.  
 FPROT - Flour protein percent at 14% moisture basis.  
 FABSC - Farinograph water absorption corrected to 14% moisture basis.  
 FPEAK - Farinograph mixing peak time in minutes.  
 FSTAB - Farinograph stability in minutes.  
 BABS - Bake water absorption at 14% moisture basis.  
 BABSC - Bake absorption corrected to mean protein of nursery.  
 MTIME - Optimum mixing time in minutes.  
 LVOL - Bread loaf volume observed in cc's.  
 LVOLC - Bread loaf volume (cc) corrected for protein to the mean protein of the nursery. (See table 1 or 2, page ix )  
 BCRGR - Bread crumb grain rating code. (See table 3, page x )

CODE	MEANING
1	Excellent (S*)
2	Satisfactory (S)
3	(Q-S)
4	Questionable-Satisfactory (Q-S)
5	(Q- $\phi$ )
6	Questionable (Q)
7	(Q- $\emptyset$ )
8	Questionable-Unsatisfactory (Q-U)
9	Unsatisfactory (U)

CODI - Cookie diameter in cm's.  
 CODIC - Cookie diameter (cm) corrected for protein to the mean protein of the nursery. (See table 1 or 2, page ix )  
 VISC - Brookfield viscosity (observed)  
 VISCC - Brookfield viscosity corrected for protein to the mean protein of the nursery.  
 CAVOL - Japanese Sponge Cake Volume in cc's.  
 SCSCOR - Sponge cake score (scale 1-100)  
 WTIN - Noodle weight increase (percent).  
 NYELD - Noodle yield.  
 NOSCORE - Noodle score (1-100)  
 MABS - Mixograph absorption at 14% moisture (%).  
 MABSC - Mixograph absorption corrected for protein (%).  
 MTYPE - Mixograph Type - From Mixograph Reference Chart.



RATE - Overall Rating when used see table 3.  
 RMKS - Remarks.

# Western Wheat Quality Laboratory

## INTERPRETATION OF DATA

As in the past reports, decisions were based on the results of the tests after adjustment to an average protein content of the nursery using correction factors derived from several years of data on particular varieties and/or classes of wheat. These correction factors and scale for ranking codes can be found in the following tables 1-3.

CORRECTION FACTORS - TABLE 1

VTN	VARIETY	(VC) LOAF VOLUME	(CC) COOKIE
1	Anza	61	0
2	Burt	51	.078
3	Coulee	76	.070
4	Fortuna	64	0
5	Gaines	38	.136
6	Hyslop	0	.137
7	Inia 66	68	0
8	Itana	60	0
9	Kharkof	57	0
10	Luke	0	.085
11	Marfed	61	.098
12	McCall	52	0
13	McDermid	0	.106
14	Moro	0	.094
15	Nugaines	62	.118
16	Omar	0	.083
17	Paha	0	.037
18	Sprague	0	.062
19	Springfield	0	.042
20	Twin	0	.149
21	Yamhill	0	.124
22	Wanser	69	0
23	Wared	62	0

Variety name (VAR) not found or where the value is zero in Table 1, use correction factor for class of sample in Table 2.

VTN = Computer system variety number

CORRECTION FACTORS - TABLE 2

CLASS	(VC) LOAF VOLUME	(CC) COOKIE
SWW	60	.110
SWS	60	.110
CLUB	55	.071
HRW	62	.080
HRS	62	.080
HWW	62	.080
HWS	62	.080

RANKING AND RATING CODES - TABLE 3

CODE BREAD CRUMB GRAIN	MEANING
1	Excellent (S*)
2	Satisfactory (S)
3	(Q-S)
4	Questionable-Satisfactory (Q-S)
5	(Q-S)
6	Questionable (Q)
7	(Q-U)
8	Questionable-Unsatisfactory (Q-U)
9	Unsatisfactory (U)

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INTRODUCTION

This is the Thirty-Fifth Annual Report of the Western Wheat Quality Laboratory of cooperative investigations with breeder, geneticists, and pathologists in the seven Western states to evaluate the milling and baking quality characteristics of experimental wheat selections grown and harvested as the 1982 crop. These investigations included several market classes and sub-classes of wheat which are commercially grown in the Pacific Northwest and the Western region and relates to their quality for commercial production and consumer acceptance. These studies deal with the physical-chemical flour properties associated with a wheat's suitability for commercial pastry and bread products.

The nurseries have been arranged in nurseries (Nursery Index in Table of Contents) and the varieties and selections are listed in the tables in order of their assigned laboratory Number. Mixograms were run on all samples evaluated, but none were reproduced for inclusion in this report. Alternately, each mixogram was characterized by type as described in the Methods Section.

1/ Research Food Technologist, Research Food Technologist, Research Food Technologist, Research Food Technologist, Physical Science Technician, Physical Science Technician, Biological Technician and Clerk-Typist, respectively, U.S. Department of Agriculture, Agricultural Research Service, Western Region, assigned to the Western Wheat Quality Laboratory, Wheat Breeding and Production Unit, Pullman, Washington.

2/ Credit is due Garrison King, Washington State University Laboratory Technician II for the flour milling and physical-chemical determinations made on early generation material. This work was supported by grant funds from the Washington Wheat Commission.

Credit is due Hamed A. Faridi, Visiting Scientist for leadership, assistance and knowledge shared on Middle-Eastern and North African flat bread requirements and methods for testing. His work was supported by a grant from the Washington, Oregon and Idaho Wheat Commissions.



## METHODS USED BY USDA, WESTERN WHEAT QUALITY LABORATORY

All wheat samples were fumigated when received with 800 cc of methyl bromide/50 gal. drum overnight and then aerated, cleaned, scoured, test weight (1, Method 84-10) determined, sub-sampled for approximate analysis, and placed in the storeroom until experimentally milled by the following methods:

Buhler Milling: All of the 1982 samples of Advanced and Regional Nurseries were milled on a Buhler, pneumatic, laboratory mill. The samples were tempered to a predetermined moisture content ranging from 14.0% to 16.0%, depending on the hardness and the known flour-bolting properties. The harder wheats require the most water. Thus, the grain was conditioned so that the most rapid and most complete separation of endosperm could be made. The temper water contained a wetting agent (.1% Aerosol OT) to hasten moisture penetration and the tempered wheat was allowed to rest for 16-24 hours before milling to permit uniform distribution of the moisture. An additional 0.5% water was added 15-20 minutes prior to milling. The Buhler experimental mill schematic flow is shown in Figure 1.

All six flour streams were combined to make a straight-grade flour. The first and second break and first and second reduction streams were combined for a patent flour. All straight-grade flour was rebolted on a 120 stainless steel wire screen and blended thoroughly.

Flour Yield: The percent of the total products recovered as straight-grade white flour.

Milling Time: The minutes required to mill a 2000-gram sample with the Buhler experimental mill and obtain a normal separation of bran, shorts, and flour. Time is determined by visual observations and adjustments by an experienced miller.

Milling Score: Calculated as follows:

$$100 - [(80 - \text{flour yield}) + 50 (\text{Flour ash} - .30) + .48 (\text{Milling time} - 15) + .5 (65 - \% \text{ long patent}) + .5 (16 - \text{1st tempering moisture})]$$

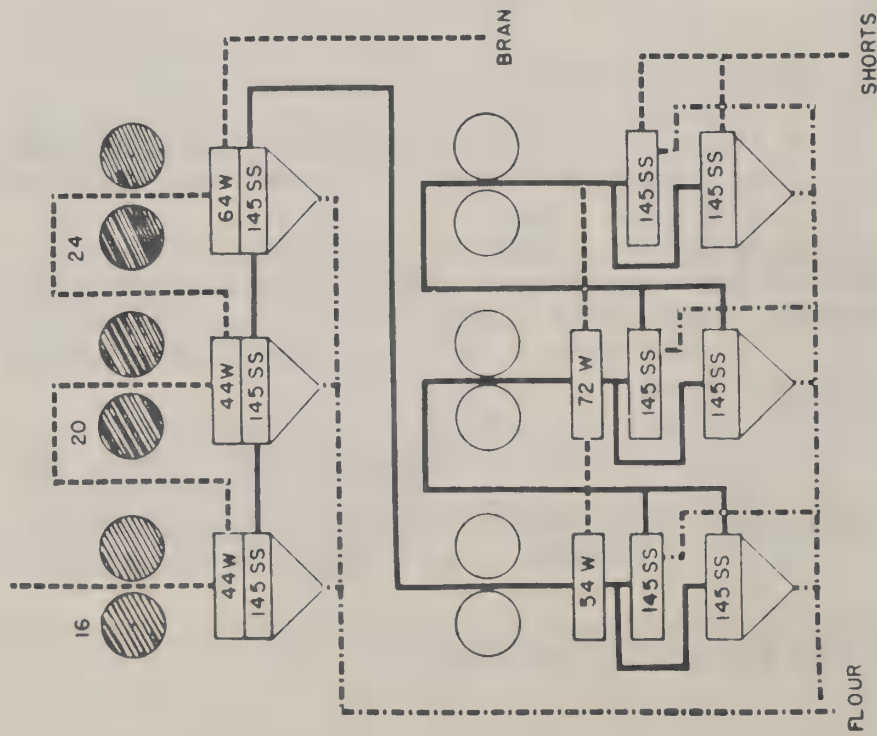
Modified Quadurmat Milling Method: The preliminary nurseries were experimentally milled on Modified Quadurmat system (500g). The procedure was described in the 27th Annual Report, Oct. 1976 (pages 1-14). Conversion of the data to give a predicted Buhler flour yield and milling score was done with the following linear equations:

Flour YieldMilling ScoreSoft wheat ( $y = 14.0671 + .83474X$ )Soft wheat ( $y = -21.60185 + 1.27367X$ )Hard wheat ( $y = 13.4166 + .83298X$ )Hard wheat ( $y = -3.43818 + 1.0448X$ )

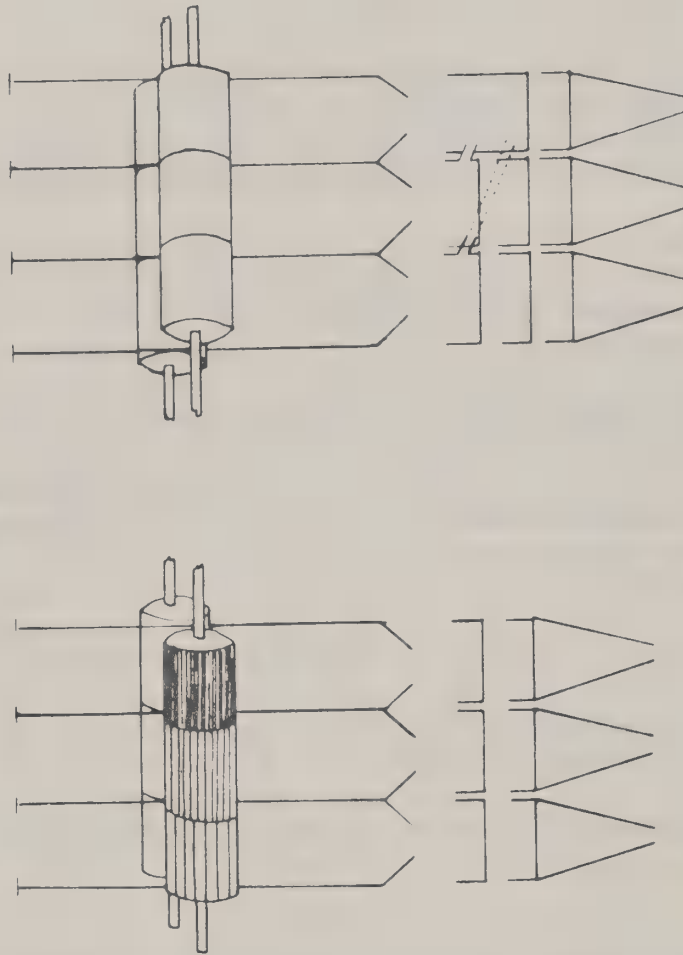
The Modified Procedure is schematically shown in Figure 2. Modifications include those described by Jeffers and Rubenthaler (11).

# BUHLER EXPERIMENTAL MILL

Clean Tempered  
Wheat



DIAMETER - 6 INCHES  
DIFFERENTIAL - 2 TO 1  
SURFACE - 300 SQUARE INCHES  
ROLLS:  
BOLTING SURFACE - 288 SQUARE INCHES

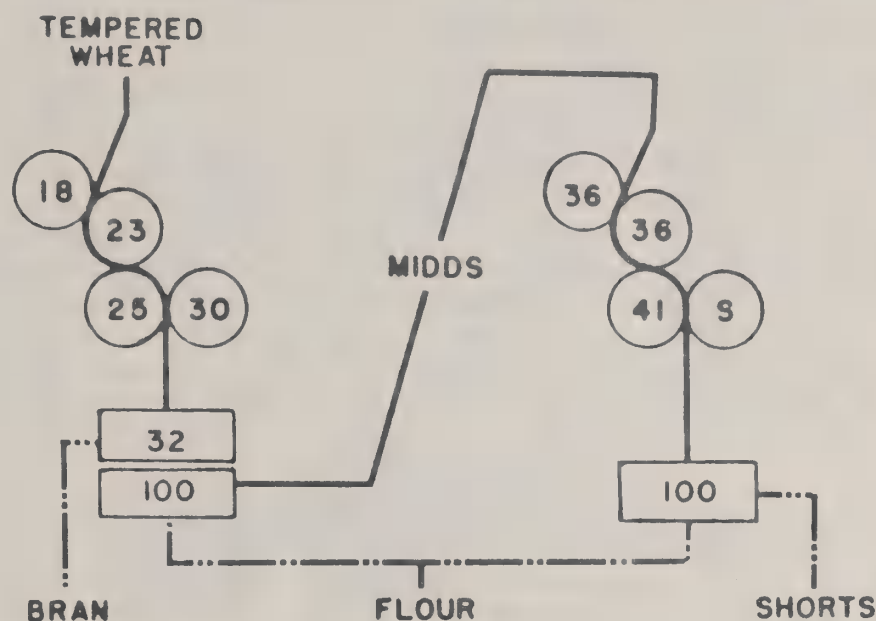


WHEAT TYPE	FEED RATE (G./MIN.)	FLOUR YIELD (%)**	FLOUR ASH (%)***
WHITE CLUB	145 - 160	73 - 75	0.39 - 0.41
HARD RED WINTER	115 - 130	68 - 73	.35 - .42
COMMON (SOFT) WHITE	90 - 120	67 - 72	.35 - .43

\*\* BASIS TOTAL PRODUCTS RECOVERED FROM MILL  
\*\*\* ASH CONTENT OF STRAIGHT-GRADE FLOUR

Figure 1. Schematic flow of the Buhler experimental mill showing a range of the average feed rates, flour yields, and flour ash of the various classes of wheat. Roll settings are varied for optimum clean-up and reduction of the stock, and feed rates according to the bolting and reduction properties.

# MODIFIED QUADRUMAT SR. MILLING PROCEDURE



## BREAK UNIT

BRABENDER QUADRUMAT JR. WITH  
QUADRUMAT SR BREAK ROLLS

## REDUCTION UNIT

BRABENDER QUADRUMAT SR.  
REDUCTION HEAD

### ROLLS:

DIAMETERS: 2.8 INCHES

### SPEED:

FAST ROLLS: 1200 RPM

SLOW ROLLS: 560 RPM

DIFFERENTIAL: 2.14 TO 1

### TEMPER:

TO 15% FOR 24 HOURS WITH  
WETTING AGENT

SIFTERS: 8 INCH TYLER TESTING  
SIEVES ON ZELENY SEDIMENTATION  
SIEVE SHAKERS

### SIFTING SCHEDULE

#### BREAK STOCK:

BRAN: REMOVED AFTER 1 MIN.

MIDDLINGS: REMOVED AFTER AN  
ADDITIONAL 2 MIN. (3 MIN. TOTAL)

REDUCTION STOCK: 3 MIN.

SAMPLE SIZE: 100-250 GRAMS TEMPERED WHEAT  
(HELD CONSTANT WITHIN EACH COMPARISON GROUP)

OUTPUT: 5-7 SAMPLES PER HOUR

Figure 2. Semi micro experimental mill flow with the roll corrugations per inch. The break rolls have corrugation spirals of 1.25, 1.75, 1.88, and 1.25 inch/ft. in progressive order, and the middling reduction roll spirals are 1.25, 1.25, 1.25, and frosted smooth. Roll spacings for first, second and third break are 0.035, 0.0035, and 0.002 inch respectively. The middling rolls are set at 0.0015, 0.0020 and 0.0015 inch respectively.



Semi Micro Flour Quality:\* Wheats milled on the semi-micro mill which gave satisfactory flour yields were evaluated by the following tests and all others with unsatisfactory milling properties were discarded: NIR protein, mixograph (3, 9), and AWRC test (14,17) to distinguish whether they fit the sub-class of club or soft common and/or hard wheats.

Micro Milling of Single Plant Selections:\* The 5-10 gm samples of grain were accurately weighed, placed in vials, and water added to bring them to 14% moisture. The tempered grain was milled on the micro mill which consists of two pairs of corrugated rolls and double sifters with 38- and 135-mesh stainless steel screens. The bran over the 38-mesh sifters was evaluated for milling properties by visual examination for the degree of bran clean-up. The throughs of the 135-mesh stainless steel screen, of those samples considered to be good milling types, were examined for flour quality by means of the Modified Micro Sedimentation Method (12). Protein and lysine are determined on these materials by NIR analysis (16). A schematic flow diagram of the micro mill is shown in Figure 3 (2, 13).

Moisture Content of Wheat & Flour: These values have not been given in these reports, but the methods are as follows: The reference test is two grams of ground wheat in an aluminum moisture dish are heated in a forced draft oven for 40 minutes at 140° C., allowed to cool in a desiccator and weighed. Flour Moisture is determined in the same manner except that it is heated only 20 minutes. The NIR (Technicon 400) is routinely used as calibrated to the above method.

Ash of Wheat and of Flour: The ash from a 4-gram sample of wheat meal or flour heated for 15 hours at 550° C. in a muffle furnace. (1, Method 08-01).

Protein of Wheat and Flour: The protein content of the samples was determined by the NIR method, and checked (about 10% of the material) by the Kjeldahl method (1, Method 46-12).

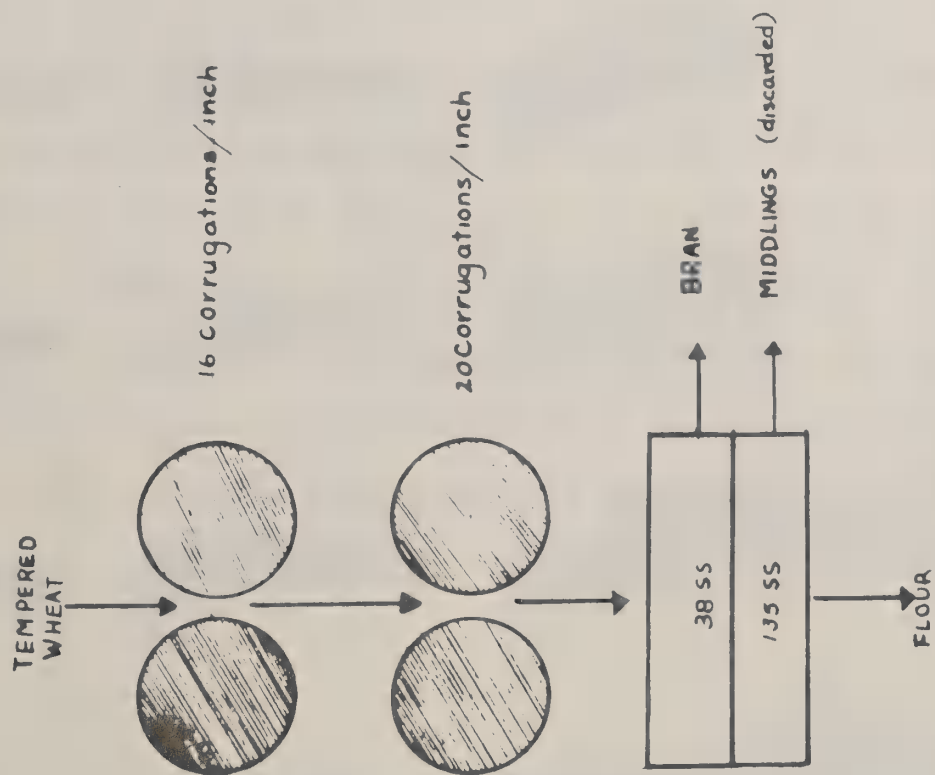
Alkaline Water Retention Capacity (AWRC): The percent increase in weight of 7.5 g flour due to absorption of water from 35 ml of .1 normal  $\text{NaHCO}_3$  solution (17).

Viscosity: Dial reading x 7.5 of a RVT Brookfield Synchro-Lectric Viscometer fitted with a No. 2 spindle at 50 R.P.M. using a suspension of 20 grams of flour in 100 ml of water and 7 ml of 1 N lactic acid (15).

Mixogram: Used to characterized new selections as to market class and estimate baking properties. The recently developed 10 gm instruments were used and the testing procedure and interpretation of K.F. Finney(9) was followed. To reduce the time and expense involved in reproducing the mixograms a reference chart was developed to characterize each curve as to type ranging from very weak to exceptionally long and strong types. The chart and instructions for its use are found on pages 7 and 8.

\*Supported by special grant of funds from the Washington Department of Agriculture and the Washington Wheat Commission to permit extensive early generation ( $F_3$ - $F_4$ ) testing.

# MICRO-MILL FLOW



ROLL SPACING 18 .012 INCH  
28 .0025 "

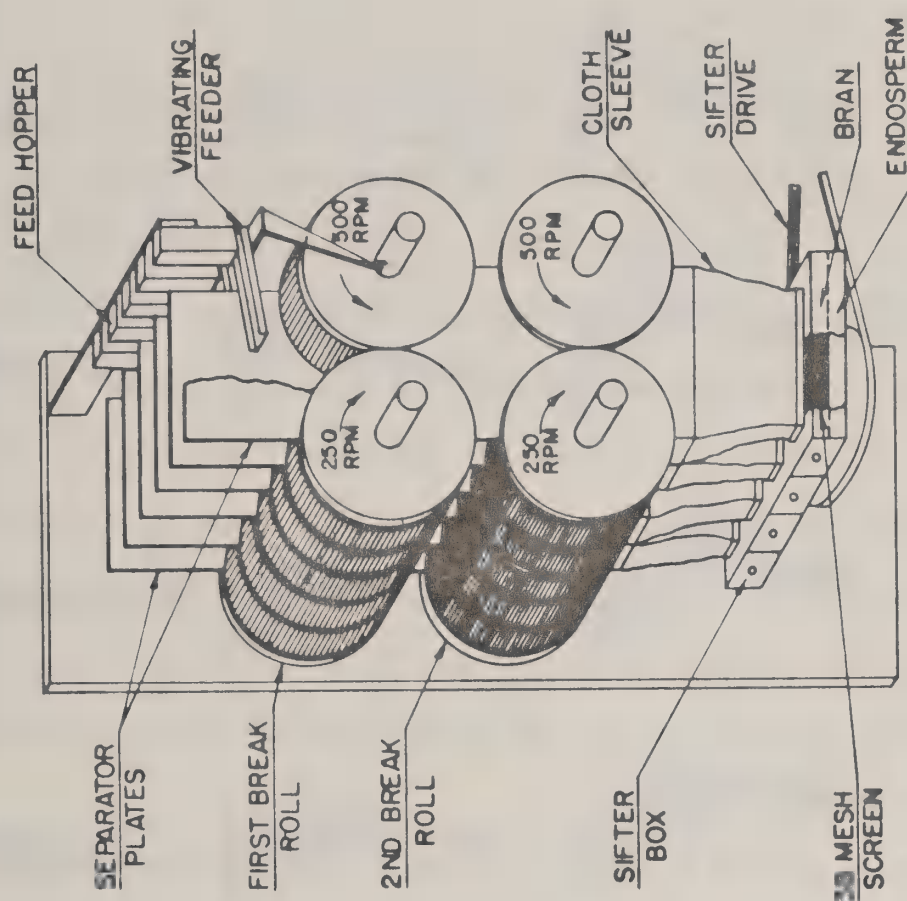


Figure 3. Schematic and flow of the micro experimental mill. Four samples are milled and sifted simultaneously and feed rate is held constant by a vibratory feeder.

## USE OF MIXOGRAM REFERENCE CHART

In addition to determining mixing time for optimum dough development by observation during baking test, mixing time and mixing tolerance, two important baking properties of wheat flour, can be determined independently from a mixogram. A mixogram is determined with 10g of flour and appropriate amount of water to give optimum absorption. It is really nothing more than a recording mixer reflecting the resistance the dough has to be mixed over a period of time. Most mixograms are run either 7 or 8 minutes which is sufficient time for most flours to give a full picture of their mixing time and to show what happens when mixing continues beyond this point (mixing peak) as reflected in the tail of the curve and commonly referred to as tolerance.

Final evaluation must be made with consideration given to the protein content of the flour, because of the effect protein content has on the mixing characteristics within the same variety. As protein increases, mixing time will decrease with an apparent increase of tolerance. To illustrate this, compare #1 high(H) with #2 medium (M) and #3 low (L) which are typical mixograms of the club wheat Paha at 12, 9, and 6% protein respectively. Similarly, 2H, 3M, and 4L are typical for Nugaines at these protein levels. Little change can be observed on any wheat above 13.0 or below 7.5% protein.

This chart will be used to identify the curve characteristics which most closely fit the sample and will be reported as numbers 1L, 1M, 1H, etc. through 8H.



## MIXOGRAM REFERENCE CHART

LOW

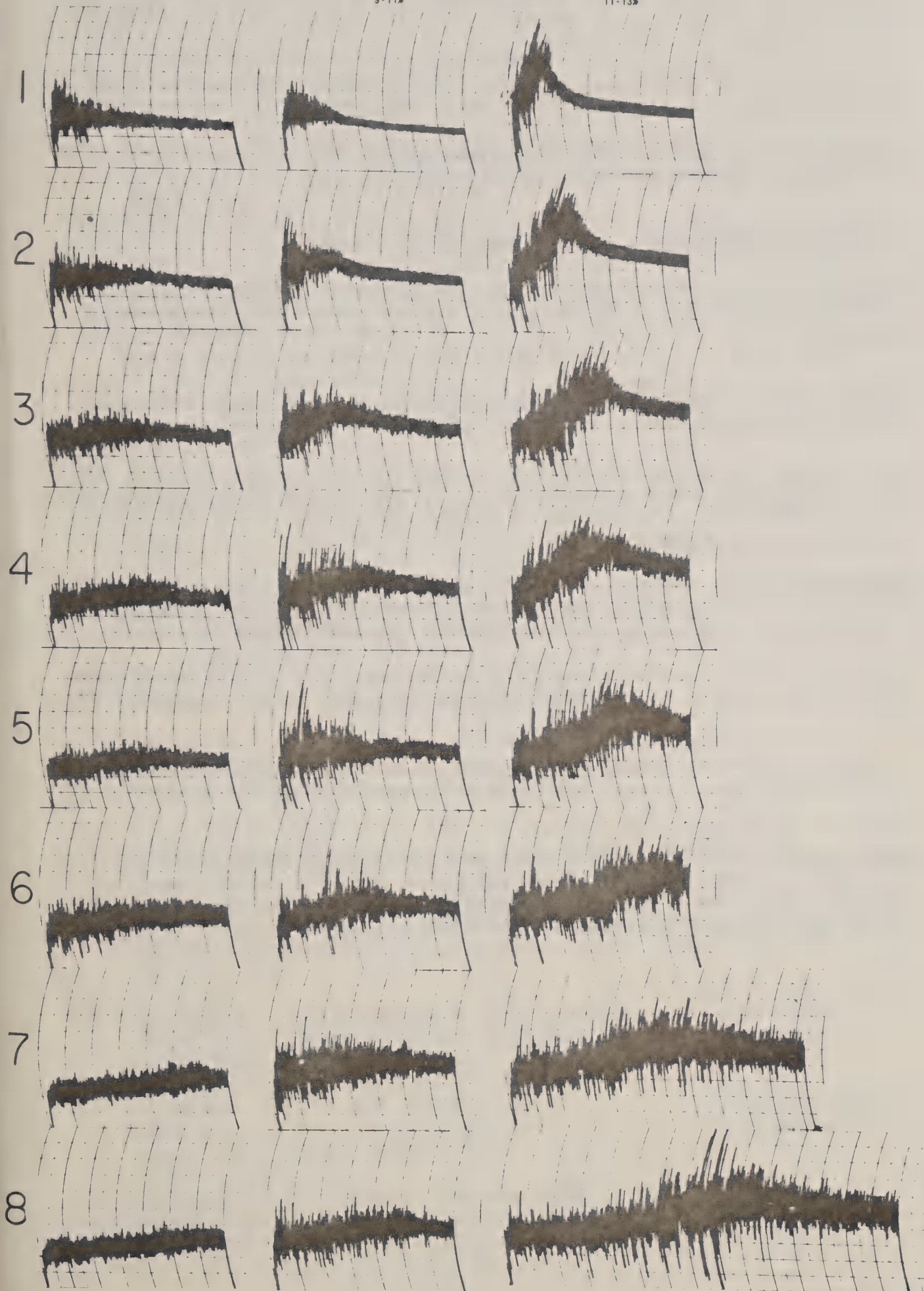
6-9%

MEDIUM

9-11%

HIGH

11-13%



Cookie Baking: 40 g of flour, micro method, using 25% absorption, 60% sugar, 30% emulsified shortening, 3% dry skim milk, 1%  $\text{NH}_4\text{HCO}_3$ , 1% NaCl, 1%  $\text{NaHCO}_3$ , was employed (8).

Cookie Diameter is the average diameter, in centimeters, of cookies baked on two separate days.

Farinograph: The Farinograph was equipped with a 50-g bowl and the Constant Flour Weight Procedure was employed (1, Method 54-21A).

Farinograph Absorption is the amount of water required to center the highest portion of the Farinograph curve on the 500 unit line.

Peak or Farinograph Mixing Time is the time interval, in minutes, from the first addition of water until the tip of the curve reaches its maximum height.

Stability of Period of Resistance is the number of minutes the top of curve remains above the 500 unit line when the highest portion (peak) is centered on the 500 unit line.

Bread Baking: An optimum absorption, optimum mixing, optimum bromate, 100 g flour and straight dough method using 7.2% yeast, 1 1/2% salt, 6% sugar, 1/4% malt extract, 4% dry milk solids, 65 ppm ascorbic acid, and 3% hydrogenated shortening was employed (5,6,7,10).

Baking Absorption: The amount of water required to make a dough of proper consistency for bread baking when mixed to optimum conditions as judged by an experienced baker using the baking method described above (4).

Mixing Time: Time in minutes required to mix the flour and the other bread dough constituents to the optimum condition as judged by an experienced baker (5).

Optimum Bromate: The amount of potassium bromate required to produce the optimum break, shred, crust, and grain characteristics of the loaf of bread (5).

Flour Color: The slurry method using 20 g of flour, 25 ml of water, stirred for 2 minutes with a glass stirring rod fitted with a 11mm policeman, and allowed to stand for 5 minutes. Reading is taken on an Agtron ( $F_2$ ) calibrated with standard color discs #63 = 0 and #85 = 100.

## REFERENCES

1. American Association of Cereal Chemists  
Cereal Laboratory Methods (7th ed.)  
The Association: St. Paul, Minn. (1962).
2. Everson, E. H. and Seeborg, E. F. The heritability of milling quality as measured by the separation of the bran and endosperm.  
Agron. Jour. 50: 511-513 (1958).
3. Finney, K. F. Evaluation of Wheat quality. Proceedings A.A.A.S. Section O Symposium on Food Quality as Affected by Production Practices and Processing. Dec. 27, 1962, Also Finney, et al., Quality Characteristics of Hard Winter Wheat Varieties Grown in the Southern, Central, and Northern Great Plains of the United States, 1963 Crop. Hard Winter Wheat Quality Laboratory, Manhattan, Kans. CR-77-64, Dec. (1964).
4. Finney, K.F. Methods of estimating and the effect of variety and protein level on the baking absorption of flour. Cereal Chem. 22: 149-158 (1945).
5. Finney, K.F. and Barmore, M.A. Optimum vs. fixed mixing time at various potassium bromate levels in experimental bread baking. Cereal Chem. 22: 244-254 (1945).
6. Finney, K.F. and Barmore, M.A. Varietal responses to certain baking ingredients essential in evaluating the protein quality of hard winter wheats. Cereal Chem 22: 225-243 (1945).
7. Finney K.F. and Barmore, M.A. Yeast variability in wheat variety test baking. Cereal Chem. 20: 194-200 (1943).
8. Finney, K.F., Morris, V.H. and Yamazaki, W.T. Micro versus macro cookie baking procedures for evaluation the cookie quality of wheat varieties. Cereal Chem. 27: 42-49 (1950).
9. Finney, K.F. and Shogren, M.D. A Ten-Gram Mixograph for Determining and Predicting Functional Properties of Wheat Flours. Baker's Digest.
10. Finney, P.L., Magoffin, C.D. Hosney, R.C. and Finney, K.F. Short-Time Baking Systems. I. Interdependence of yeast concentration, fermentation time and oxidation requirement. Cereal Chem. 53: 126-134 (1976).
11. Jeffers, H.C. and Rubenthaler, G.L. Effect of Roll Temperature on Flour Yield with the Brabender Quadrumat Experimental Mills. Cereal Chem. 54(5): 1018-1025 (1979)
12. Kitterman, J.S., and Barmore, M. A. A modified micro sedimentation test for screening early-generation wheat selections. Cereal Chem. 46: 273-280 (1969).
13. Kitterman, J.S., Seeborg, E.F. and Barmore, M.A. A note on the modification of the five-gram milling quality test and the five-gram micro-mill. Cereal Chem. 37: 762-764 (1960).



## REFERENCES -- Continued

14. Kitterman, J.S. and Rubenthaler, G.L. Assessing the quality of early generation wheat selections with the micro ARWC test. Cereal Science Today 16: 313-328 (1971).
15. Kitterman, J.S. and Rubenthaler, G.L. Application of the Brookfield Viscometer for measuring the apparent viscosity of acidulated flour-water suspensions. Cereal Science Today 16: 275-276 (1971).
16. Rubenthaler, G.L. and Bruinsma, B.L. Lysine Estimation in Cereals by Near Infrared Reflectance. Crop Science 18: 1039-1042 (1978).
17. Yamazaki, W.T. An alkaline water retention capacity test for evaluation of cookie baking potentialities of soft winter wheat flours. Cereal Chem 30: 242-246 (1953).

PUBLICATIONS  
(Jan. 1 - Dec. 31/83)

1. Faridi, H.A., Finney, P.L. and Rubenthaler, G.L. 1983 Iranian Flat Breads: Relative Bioavailability of Zinc. *Journal of Food Science* 48(1):107-110.
2. Faridi, H.A., Rubenthaler, G.L. and Finney, P.L. 1983 Iranian Flat Breads: Relative Bioavailability of Magnesium. *Nutrition Reports International* 27(3):475-483.
3. Faridi, H.A., Finney, P.L. and Rubenthaler, G.L. 1983 Micro Baking Evaluation of Some U.S. Wheat Classes for Suitability in North African Breads. *Cereal Chem.* 60(1):74-79.
4. Morad, M.M. and Rubenthaler, G.L. 1983 Germination of Soft White Wheat and its Effect on Flour Fractions, Bread Baking and Crumb Firmness. *Cereal Chem.* 60(6):413-417.
5. Faridi, H.A., Finney, P.L. and Rubenthaler, G.L. 1983 Effect of Soda Leavening on Phytic Acid Content and Physical Characteristics of Middle Eastern Breads. *Journal of Food Science*, Nov./Dec. 83.
6. Faridi, H.A. and Rubenthaler, G.L. Experimental Method for Laboratory Chinese Steamed Bread Production and Effect of Steaming and Ingredients on Bread Starch Gelatinization and Freshness. *Proceeding - Sixth International Wheat Genetics Symposium*, Nov. 28 - Dec. 3/83, Kyoto, Japan.
7. Pumphrey, F.V. and Rubenthaler, G.L. 1983 Lodging Effects on Yield and Quality of Soft White Wheat. *Cereal Chem.* 60(4):268-270.
8. Faridi, H.A. and Rubenthaler, G.L. 1983 Ancient Breads and a New Science: Understanding Flat Breads. *Cereal Foods World* 28(10):627-629.
9. Finney, P.L. 1983 An Improved Falling Number Method to Estimate Alpha-amylase in Wheat Flours. *Cereal Foods World* 28(9):580 ABSTRACT #195.
10. Finney, P.L. and Jeffers, H.C. 1983 Some Effects of Wheat Variety, Flour Granulation and Particle Size and Bread Formulation on Whole Wheat Bread Quality. *Cereal Foods World* 28(9):566 ABSTRACT #103.
11. Finney, P.L. 1983 Effect of Germination on Cereal and Legume Nutrient Changes and Food or Feed Value: A Comprehensive Review. *Recent Advances in Phytochemistry* Vol. 17, Chapter 2:229-306.

## INVITED TECHNICAL PRESENTATIONS

Rubenthaler, G.L., 1983

Rubenthaler, G.L. 1983 One hour lecture "Wheat Quality and Method of Measuring". WSU Dept. of Agronomy, Ag. 303, Grain Crops Class, March 28.

Rubenthaler, G.L. 1983 One hour lecture "Noodle Making", WSU Dept. of Food Science, FS-474, Cereal Products class. April 25.

Rubenthaler, G.L. 1983 Presented a seminar and tour "Western Wheat Quality Laboratory's Research and Role in Variety Development", to Whitman County Food Service Association, Pullman, WA, March 15.

Rubenthaler, G.L. 1983 One hour lecture, "Principles and Uses of Near Infrared Reflectance", WSU Dept. of Food Science, FS 482, Food Analysis class. May 3.

Rubenthaler, G.L. 1983 Presented talk "Chinese Steamed Bread", to Tri-State Wheat Workers meeting, Hermiston, OR. June 21.

Rubenthaler, G.L. 1983 Presented 6 hours of lectures "Grain and Flour Quality Control", at U.S. Wheat Associates -- Middle East Milling Shortcourse, Cairo, Egypt. July 25-27.

Rubenthaler, G.L. 1983 Seminar and baking demonstration "Western Wheat Quality Laboratory's Research and Role in Variety Development", to Arab States Team. Sept. 9.

Rubenthaler, G.L. 1983 Presented talk "Soft White Wheat Quality" to Governor Spellman, PRC Delegation and Governor of Succheon Provence. Sept. 15.

Rubenthaler, G.L. 1983 Taught a short course (4 hours) on "Milling and End-use Quality of Soft White Wheat", at International Grains Program Short Course, Kansas State University, Manhattan, KS. Sept. 29.

Rubenthaler, G.L. 1983 Seminar and tour "Functions of the Western Wheat Quality Laboratory in Variety Development", to Yemen Wheat Team. Oct. 13.

Rubenthaler, G.L. Presented talk "Commercial Aspect of Baking", at 1983 Consumer Awareness Seminar, Portland, OR. Oct. 21.

Rubenthaler, G.L. 1983 Presented paper "Laboratory Method of Producing Chinese Steamed Bread and Effects of Formula, Steaming and Storage on Bread Starch Gelatinization", at 6th International Wheat Genetics Symposia, Kyoto, Japan. Nov. 28 - Dec. 2.

Rubenthaler, G.L. 1983 Presented talk "Breads from PNW Soft Wheat", at Japan Section of AACC meeting. Tokyo, Japan. Dec. 5.



INVITED TECHNICAL PRESENTATIONS  
(con't)

Finney, P.L., 1983

Finney, P.L. and Jeffers, H.C. 1983 Seminar and tour "Function of the Western Wheat Quality Laboratory", to India Trade Team. July 14.

Finney, P.L. 1983 Presented paper, "Improved Falling Number method to estimate Alpha-amylase in Wheat Flours", at AACC 68th Annual Meeting, Kansa City, MO. Oct. 30 - Nov. 3.

Finney, P.L. 1983 Presented paper "Some Effects of Wheat Variety, Flour Granulation and Particle Size and Bread Formulation on Whole Wheat Bread Quality", at AACC 68th Annual Meeting, Kansas City, MO. Oct. 30 - Nov. 3.

Western Wheat Quality Laboratory  
1982 Crop

## VISITORS

The Western Wheat Quality Laboratory Staff was pleased to have had the opportunity to meet, discuss, and give tours of our facilities with some 109 visitors this past year. Several of these people were wheat breeders, grain buyers, flour millers, students and various government officials with an interest in wheat quality. The following is a list, not all inclusive, to those who visited our facilities and signed our guest book:

W.S.U. Animal Science Dept. Laboratory Analysis Class	10
W.S.U. Agronomy and Soils Dept. Cereals Quality Class	15
W.S.U. Food Science & Human Nutrition, Food Analysis	10
U.S. Wheat Workers	32
<u>Foreign:</u>	
Egypt	4
Korea	4
India	5
Japan	8
Australia	1
W. Germany	1
Jordan	1
Peoples Republic of China	12
Spain	1
France	1
Kuwait	1
Bahrain	1
United Arab Emirates	1
Yemen	2

EARLY GENERATION NURSERIES  
1982 Crop

NURSERY	LOCATION	BREEDER	CLASS	NUMBER TESTED	NUMBER PROMISING
Snow Mold	Lind	G.W. Bruehl	SWW	20	14
SCS Farm-Hole	Pullman	G.W. Bruehl	SWW	12	0
Beard	Harrington	G.W. Bruehl	SWW	23	14
SCS Foot	Pullman	G.W. Bruehl	SWW	24	23
Yield Trial	Ritzville	C.J. Peterson	SWW	120	76
Spring Spray Trial - I & II	Pullman	R.E. Allan	SWW	319	0
SCS Farm-Hole	Pullman	G.W. Bruehl	SWW	22	5
Soft White Single Plots	Pullman	C.F. Konzak	SWW	222	61
Yield Trial	Lewiston	C.J. Peterson	SWW	120	79
Hard Red Single Plots	Pullman	C.F. Konzak	HRS	324	245
Hessian Fly Lines	Pullman	C.F. Konzak	HRS	54	39
Hessian Fly Lines	Royal Slope	C.F. Konzak	SWS	71	24
Soft White - I & II	Pullman/Late	R.E. Allan	SWW	65	37
Clubs	Walla Walla	R.E. Allan	Club	90	71
Management Trials					
2 Reps. - T & NT	Pullman	R.E. Allan	SWW	216	0
2-Gene Dwarf	Walla Walla	R.E. Allan	SWW	60	35
TCK Lines	Walla Walla	R.E. Allan	SWW	40	37
Single Rep. and					
C.J.P. Entries	Walla Walla	R.E. Allan	SWW	42	40
Blackhull/Nugaines					
Reps. II & III	Pullman/Late	R.E. Allan	SWW	120	94
Blackhull/Paha					
Reps. II. & III.	Pullman/Late	R.E. Allan	Club	120	84





NURSCO 1

TOL. OH, CART. MO, CH. WA

LABNUM	VARIETY	IDNO	CLASS	FMIST	FASH	FPROT	MABSC	MTYPE	FABS	FPEAK	FSTAB	VISC	AWRC
					<u>1/</u>		<u>3/</u>						
820001	CLIMAX TOLEDO, OH		SRW	12.4	0.45	9.5	52.6	3L	53.0	1.3	6.1	56	58.0
820002	CERTIFIED TOLEDO, OH		SRW	11.9	0.43	9.5	51.6	3L	53.6	1.0	3.3	58	59.0
820003	CLIMAX CARTHAGE, MO		SRW	12.5	0.48	10.6	54.3	6M	56.1	4.8	7.5	101	63.0
820004	CERTIFIED CARTHAGE, MO		SRW	12.3	0.49	11.2	52.8	6M	57.3	5.7	9.2	109	66.0
820005	COOKIE CHENEY, WA		SWW	12.4	0.51	7.2	53.4	5L	54.6	1.0	2.9	35	65.0
820006	CRACKER CHENEY, WA		SWW	12.0	0.47	8.6	52.6	5L	56.3	1.0	3.4	58	66.0

1/ Observed Values Corrected to 14% Moisture Basis.2/ Absorption at 14% Moisture Corrected to 9% Protein.3/ Observed Values Corrected to 9% Protein.5/ Particularly Promising Overall Quality Characteristics.6/ Promising Overall Quality Characteristics.





TOL. OH, CART. MO, CH. WA

NURSCO 1

LABNUM	VARIETY	IDNO	CLASS	BABS	MTIME	LVOL	CODI	CAVOL	SCSOR	WT IN	NOSCO	RMKS	BCRGR	F.N.
8200001	CLIMAX TOLEDO, OH		SRW	54.3	2.6	800	9.75	1268	77.0	340	60	7	7	381
8200002	CERTIFIED TOLEDO, OH		SRW	53.3	2.7	800	9.67	1283	77.0	344	62	7	7	380
8200003	CLIMAX CARTHAGE, MO		SRW	55.6	3.2	910	9.10	1208	70.0	328	54	4	4	335
8200004	CERTIFIED CARTHAGE, MO		SRW	56.2	3.5	885	9.07	1258	68.0	331	54	4	4	314
8200005	COOKIE CHENEY, WA		SWW	54.3	3.5	475	9.32	1263	79.0	349	73	9	9	411
8200006	CRACKER CHENEY, WA		SWW	54.9	3.0	650	9.12	1318	73.0	347	67	9	9	431

COMMENTS: Evaluations made in co-operation with Nabisco, Inc. in an effort to identify inherent property differences of Eastern and Western soft wheats that may relate to the poor cracker baking performance of Western soft white wheats.



NURSCO 2

SUTTER, KINGS CO., CA

L.F. JACKSON

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE	BABS	BABSC
						1/		1/	3/			3/
820007	ANZA --SUTTER COUNTY--	C1015284	HRW	65.2	74.1	0.42	87.6	8.0	56.8	2L	58.0	59.0
820008	YECORA ROJO	UC112	HRW	66.0	71.8	0.48	82.3	9.9	59.2	8M	63.0	62.4
820009	PHOENIX	UC221	HWW	64.0	72.8	0.43	86.1	7.4	55.4	3L	56.3	57.9
820010	YOLO	UC353	HRW	64.8	72.5	0.40	87.0	6.9	54.4	5L	54.5	56.6
820011	INIA/ANZA	UC360	HWW	64.0	70.2	0.40	84.7	7.0	55.6	2L	54.1	56.1
820012	PROBRAND 771	6/ UC412	HRW	63.6	71.5	0.40	86.2	9.0	54.2	7M	57.9	57.9
820013	KLASIC	6/ UC415	HWW	66.4	72.2	0.40	87.0	9.4	57.1	8M	61.3	61.3
820014	OSLO	5/ UC436	HRW	65.6	73.0	0.38	88.6	9.0	55.6	6L	56.8	56.8
820015	AZTECA 67/ANZA	6/ UC485	HRW	66.4	69.3	0.43	82.2	7.4	56.9	5M	59.0	60.6
820016	TZPP/ANZA	UC487	HRW	65.6	72.2	0.40	86.8	7.9	57.2	5M	58.8	59.9
820017	TZPP/ANZA	UC488	HRW	66.8	72.6	0.41	86.6	8.5	57.5	4M	60.7	61.2
820018	CLEO/INIA//ANZA	UC489	HRW	67.2	69.3	0.43	82.3	7.7	56.7	2L	58.6	59.9
820019	GENERO F81	UC491	HRW	65.2	70.4	0.45	82.6	8.2	56.0	4L	57.4	58.2
820020	WESTBRED 911	UC521	HRW	64.8	68.1	0.47	78.8	7.5	58.5	6L	61.2	62.7
820021	NK2437	6/ UC536	HRW	66.0	71.1	0.43	84.0	9.1	58.4	5M	62.7	62.6
820022	NK3940	6/ UC537	HRW	65.6	71.7	0.42	85.3	8.5	56.0	4L	56.7	57.2
820023	NK4236	UC538	HRW	65.2	71.6	0.42	85.2	7.2	58.3	6L	58.7	60.5
820024	WS3974	5/ UC540	HRW	63.6	69.8	0.37	85.9	10.6	56.2	7M	60.0	58.4
820025	WS4071	6/ UC541	HRW	64.0	69.4	0.49	79.4	8.8	58.2	8M	61.2	61.4
820026	SGW0693	6/ UC542	HRW	66.4	70.2	0.37	86.1	10.6	56.1	7M	60.4	58.8
820027	SGY022	6/ UC543	HWW	65.6	70.6	0.42	84.0	9.0	57.6	8M	61.3	61.3
820028	TADORNA/INIA	UC544	HRW	64.4	72.3	0.38	88.1	7.4	53.8	3L	54.4	56.0
820029	TADORNA/INIA	UC545	SRW	64.4	72.4	0.39	88.6	8.5	50.9	5L	54.9	55.4
820030	TADORNA/INIA	UC546	HRW	64.4	72.4	0.48	82.9	7.9	52.6	3L	55.0	56.1
820031	NUDIF/INIA//ANZA	UC547	HRW	63.2	71.8	0.42	85.4	7.9	54.2	3L	55.1	56.2
820032	GLENNSON M81	UC548	HRW	66.0	69.7	0.49	79.4	8.4	54.2	6M	57.3	57.9
820033	URES T81	UC549	HRW	65.6	68.2	0.45	79.9	8.3	54.3	6L	59.1	59.8
820034	VEERY'S -S'	UC551	HRW	65.2	70.6	0.46	81.9	8.6	55.0	6L	58.8	59.2
820035	BC60/CALIDAD//ANZA	UC552	SWW	66.4	71.5	0.44	83.9	8.4	52.4	2M	53.8	54.4
820036	TONICHI S81	UC554	SWW	64.8	73.1	0.48	83.9	8.4	52.0	5L	53.9	54.5
820037	SONOITA F81	UC555	HWW	66.0	70.0	0.47	80.9	7.2	56.9	6L	58.8	60.6
820038	TSH -S'	UC556	HWW	65.2	70.6	0.49	80.6	7.6	55.4	6L	57.2	58.6
820039	ANZA --KINGS COUNTY--	C1015284	HRW	65.2	73.4	0.42	86.9	8.7	55.4	1L	56.3	56.6
820040	YECORA ROJO	UC112	HRW	66.0	70.8	0.45	82.7	9.9	56.9	6M	61.0	60.1
820041	PHOENIX	UC221	HWW	65.2	72.5	0.42	86.0	9.1	54.4	2M	56.7	56.6

COMMENTS: Protein content of both the Sutter and Kings County nurseries were very low for desirable bread baking properties and clear differentiation of baking quality. However, based on comparable results with the check varieties several of the experimental selections appear to be equal to or better than Yecora Rojo in overall quality. These are noted with footnotes in the tables. Deficiencies are noted under remarks (MKS). Due to the low protein, additional tests were conducted to determine suitability of such wheats ( COMMENTS continued on page 2.)





NURSCO 2

SUTTER, KINGS CO., CA

L.F. JACKSON

LABNUM	VARIETY	IDNO	CLASS	MTIME	LVOL	LVOLC 4/	BCRGR	OVERALL		RMKS
								MARRAQUETA RATING*	W. ARABIC POCKET BREAD	
820007	ANZA --SUTTER COUNTY--	C1015284	HRW	1.8	740	802	8	P too weak	E	P-LVOL, MTIME, & ↑
820008	YECORA ROJO	UC112	HRW	5.1	935	898	2	P " strong	F-G	
820009	PHOENIX	UC221	HRW	2.5	760	859	8	G	E	P-LVOL&BCRGR
820010	YOLO	UC353	HRW	2.2	775	905	8	P too weak	F-G	P-BCRGR
820011	INIA/ANZA	UC360	HRW	1.7	710	834	9	VP	F-poor TBR	P-MTIME&BCRGR
820012	PROBRAND 771	UC412	HRW	4.6	915	915	2	G-E	F-poor TBR	
820013	KLASIC	UC415	HRW	6.6	935	910	2	F-too strong	F-G	
820014	OSLO	UC436	HRW	3.3	930	930	2	G	E	BCRGR
820015	AZTECA 67/ANZA	UC485	HRW	3.2	675	774	9	G	G	Q-FYELD; P-LVOL&↑
820016	TZPP/ANZA	UC487	HRW	2.8	825	893	4	G	G	Q-BCRGR
820017	TZPP/ANZA	UC488	HRW	3.4	840	871	4	G-E	G-E	Q-BCRGR
820018	CLEO/INIA//ANZA	UC489	HRW	3.0	700	781	9	G-E	E	Q-FYELD; P-LVOL&↑
820019	GENERO F81	UC491	HRW	3.9	725	775	8	G-E	E	P-LVOL&BCRGR
820020	WESTBRED 911	UC521	HRW	6.2	720	813	7	G	G	P-FYELD; P-LVOL&↑
820021	NK2437	UC536	HRW	5.7	895	889	2	F-strong	E	BCRGR
820022	NK3940	UC537	HRW	2.9	875	906	2	G	E	
820023	NK4236	UC538	HRW	4.0	795	907	6	P-F too weak	F-G	P-BCRGR
820024	WS3974	UC540	HRW	3.7	960	861	1	F-G strong	F-G	Q-FYELD
820025	WS4071	UC541	HRW	8.4	850	862	4	P-F too strong	P-F	P-FYELD; Q-BCRGR
820026	SGW0693	UC542	HRW	3.1	910	811	2	G	G	
820027	SGY022	UC543	HRW	5.4	880	880	3	G	G-E	
820028	TADORNA/INIA	UC544	HRW	3.5	805	904	8	G	G	P-BCRGR (soft ↑)
820029	TADORNA/INIA	UC545	SRW	3.7	900	930	2	P-Ftoo weak	P-F poorTBR	kernel texture
820030	TADORNA/INIA	UC546	HRW	3.5	825	893	5	G	P-poorTBR	Q-BCRGR
820031	NUDIF/INIA//ANZA	UC547	HRW	3.1	790	858	9	G	P-FpoorTBR	P-LVOL&BCRGR
820032	GLENNSON M81	UC548	HRW	4.0	790	827	9	G	G	P-FYELD&BCRGR
820033	URES T81	UC549	HRW	4.4	635	678	9	G	G	P-FYELD; LVOL&BCRGR
820034	VEERY'S "S"	UC551	HRW	3.5	695	720	9	G	F-GpoorTBR	P-LVOL&BCRGR
820035	BC60/CALIDAD//ANZA	UC552	SWW	1.8	735	771	9	P-too weak	F-Gpoor TBR	P-MTIME, LVOL& ↑
820036	TONICHI S81	UC554	SWW	3.7	820	856	7	P-too weak	F-Gpoor TBR	P-BCRGR
820037	SONOITA F81	UC555	HRW	5.6	725	837	8	F-Gtoo strong	F-GpoorTBR	P-BCRGR
820038	TSH "S"	UC556	HRW	4.3	720	807	9	G	F-Gpoor TBR	P-BCRGR
820039	ANZA --KINGS COUNTY--	C1015284	HRW	1.5	710	729	8			P-BCRGR
820040	YECORA ROJO	UC112	HRW	4.1	900	844	2			
820041	PHOENIX	UC221	HRW	2.4	805	799	6			P-LVOL&BCRGR

P = Poor Overall Properties. F = Fair Overall Properties. G = Good Overall Properties. E = Excellent Overall Properties.  
TBR = Top to Bottom Ratio.



LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE	BABS	BABSC
						1/		1/	3/			3/
820042	YOLO	UC353	HRW	65.6	72.7	0.40	87.3	8.0	54.1	2M	54.1	55.1
820043	INIA/ANZA	UC360	HRW	65.2	69.7	0.40	84.4	8.0	52.8	1L	53.8	54.8
820044	PROBRAND 771	6/ UC412	HRW	63.6	70.9	0.40	85.6	8.6	54.2	6L	57.0	57.4
820045	KLASIC	6/ UC415	HRW	66.0	72.8	0.42	86.6	8.7	55.5	6L	58.9	59.2
820046	OSLO	5/ UC436	HRW	66.0	74.4	0.39	89.8	10.7	55.5	5M	58.4	56.7
820047	AZTECA 67/ANZA	6/ UC485	HRW	66.8	70.2	0.44	82.7	9.0	54.0	2M	58.2	58.2
820048	TZPP/ANZA	UC487	HRW	65.6	71.5	0.43	84.5	8.1	57.6	2M	58.9	59.8
820049	TZPP/ANZA	UC488	HRW	65.6	72.1	0.43	85.4	8.3	55.8	2M	58.8	59.5
820050	CLEO/INIA//ANZA	UC489	HRW	66.8	70.6	0.41	84.8	9.0	55.8	2M	59.0	59.0
820051	GENERO F81	UC491	HRW	66.0	69.6	0.48	80.1	8.8	54.7	3L	58.7	58.9
820052	WESTBRED 911	UC521	HRW	65.6	68.6	0.43	81.5	8.6	56.6	6L	60.4	60.8
820053	NK2437	6/ UC536	HRW	66.4	70.4	0.42	84.1	9.3	55.2	6M	59.7	59.4
820054	NK3940	6/ UC537	HRW	66.0	74.0	0.41	88.1	10.9	56.9	2M	60.0	58.1
820055	NK4236	UC538	HRW	64.8	71.6	0.44	84.3	7.6	56.2	4L	58.0	59.4
820056	WS3974	5/ UC540	HRW	62.8	71.2	0.40	86.1	9.9	56.1	4L	58.2	57.3
820057	WS4071	6/ UC541	HRW	64.4	70.5	0.49	80.3	12.0	57.9	3H	63.1	60.1
820058	SGW0693	6/ UC542	HRW	66.0	70.9	0.34	88.4	11.5	57.2	3M	61.9	59.4
820059	SGY022	6/ UC543	HRW	66.0	71.8	0.43	85.0	10.4	54.6	6M	59.2	57.8
820060	TADORNA/INIA	UC544	HRW	64.8	73.9	0.38	89.9	8.6	53.1	2L	55.2	55.6
820061	TADORNA/INIA	6/ UC545	SRW	65.6	72.4	0.37	89.9	9.3	50.4	2L	52.7	52.4
820062	TADORNA/INIA	UC546	HRW	64.0	73.1	0.38	88.6	8.2	52.5	2L	54.2	55.0
820063	NUDIF/INIA//ANZA	UC547	HRW	63.6	72.5	0.41	86.6	9.2	53.4	1L	56.1	55.9
820064	GLENNSON M81	UC548	HRW	66.0	71.5	0.51	80.4	9.1	54.1	2L	58.4	58.3
820065	URES T81	UC549	HRW	66.4	70.0	0.48	80.3	8.6	55.2	3M	59.0	59.4
820066	VEERY'S 'S'	UC551	HRW	65.6	70.7	0.45	82.5	9.5	53.7	2M	58.4	57.9
820067	TONICHI S81	UC554	SWW	64.8	73.3	0.45	85.8	9.0	50.9	2L	53.4	53.4
820068	SONOITA F81	UC555	HRW	66.4	71.0	0.40	85.4	9.5	55.6	3L	58.3	57.8
820069	TSH 'S'	UC556	HRW	64.4	71.2	0.45	83.1	8.5	54.6	2L	56.8	57.3
820559	Westbend 911(Western Grain Marketing, Inc.)	HRW	HRW	69.2	67.2	0.47	74.1	11.6	59.4	4H	69.2	68.6
820660	Klassic		HRW	59.2	67.3	0.40	77.5	11.0	56.0	8H	59.2	59.2

(Comments Contd.) in markets of the Middle-East for flat breads and Chilean Marraqueta rolls. Several appeared well suited, but it should be noted that both Anza and Yecora Rojo were not suited for Marraqueta for different reasons, and both made acceptable Middle-Eastern pocket breads. These trials were done on a composite of flour using equal amounts from Sutter and Kings County. Two additional samples (Westbend 911 and Klassic) at higher protein levels were received from Western Grain Marketing, Inc. are included at the bottom of page 2. Both were found to be poor in flour yield but acceptable in baking properties.





NURSCO 2

SUTTER, KINGS CO., CA

L.F. JACKSON

LABNUM	VARIETY	IDNO	CLASS	MTIME	LVOL	LVOLC 4/	BCRGR	OVERALL OVERALL <sup>7/</sup>		RMKS
								MARRAQUETA	ARABIC	
								RATING	POCKET BREAD	
820042	YOLO	UC353	HRW	1.5	770	832	8			P-MTIME, LVOL&BCRGR
820043	INIA/ANZA	UC360	HRW	1.0	605	667	9			P-MTIME, LVOL&BCRGR
820044	PROBRAND 771	UC412	HRW	4.1	840	865	3			
820045	KLASIC	UC415	HRW	5.6	865	884	3			Q-FYELD
820046	OSLO	UC436	HRW	2.2	950	845	2			
820047	AZTECA 67/ANZA	UC485	HRW	2.5	645	645	9			VP-LVOL&BCRGR
820048	TZPP/ANZA	UC487	HRW	2.2	775	831	9			P-LVOL&BCRGR
820049	TZPP/ANZA	UC488	HRW	2.7	715	758	9			P-LVOL&BCRGR
820050	CLEO/INIA//ANZA	UC489	HRW	2.6	770	770	8			P-LVOL&BCRGR
820051	GENERO F81	UC491	HRW	3.3	640	652	9			VP-LVOL&BCRGR
820052	WESTBRED 911	UC521	HRW	4.3	795	820	3			P-FYELD
820053	NK2437	UC536	HRW	4.0	865	846	2			
820054	NK3940	UC537	HRW	1.7	940	822	2			Q-MTIME
820055	NK4236	UC538	HRW	3.4	750	837	8			P-BCRGR
820056	WS3974	UC540	HRW	3.0	930	874	1			
820057	WS4071	UC541	HRW	2.9	1005	819	2			Q-MSCOR
820058	SGW0693	UC542	HRW	2.5	940	785	3			
820059	SGY022	UC543	HRW	3.6	900	813	2			P-LVOL&BCRGR
820060	TADORNA/INIA	UC544	HRW	2.0	755	780	8			Q-BCRGR (soft)
820061	TADORNA/INIA	UC545	SRW	2.3	855	837	4			
820062	TADORNA/INIA	UC546	HRW	1.8	735	785	8			P-MTIME, LVOL&BCRGR
820063	NUDIF/INIA//ANZA	UC547	HRW	2.2	785	773	8			P-LVOL&BCRGR
820064	GLENNSON M81	UC548	HRW	2.7	830	824	4			P-MSCOR; Q-BCRGR
820065	URES T81	UC549	HRW	2.6	600	625	9			VP-LVOL&BCRGR
820066	VEERY'S 'S'	UC551	HRW	2.8	725	694	9			VP-LVOL&BCRGR
820067	TONICHI S81	UC554	SWW	1.3	810	810	8			P-MTIME&BCRGR
820068	SONOITA F81	UC555	HRW	2.9	890	859	8			P-BCRGR
820069	TSH 'S'	UC556	HRW	1.7	765	796	8			P-BCRGR
820559	Westbend 911 (Western Grain Marketing, Inc.)		HRW	4.5	978	941 <sup>8/</sup>	2			P-Flour yield
820660	Klassic		HRW	6.9	1093	1093	2			P-Flour yield

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 9% Protein.

4/ Observed Values Corrected to 9% Protein.

5/ Particularly Promising Overall Quality Characteristics.

6/ Promising Overall Quality Characteristics.

7/ See page 1 for composite results.

8/ Observed values Corrected to 11% Protein.



NURSCO 3

POMEROY, WA

C.J. PETERSON

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	CODI	CODIC	MTYPE	RMKS
					1/	1/	3/	4/					
820070 17		AM79057	SWW	61.6	70.4	0.36	87.5	7.7	52.2	9.50	9.47	6L	
820071 DAWS		C1017419	SWW	61.2	70.1	0.38	86.2	7.4	52.0	9.05	8.98	6L	
820072 LUKE		C1014586	SWW	61.6	71.0	0.37	88.0	7.1	53.7	9.69	9.61	4L	
820073 BARBEE		C1017417	CLUB	59.6	68.9	0.39	84.1	7.0	49.7	9.61	9.50	1L	
820074 29		5/ WA6585	SWW	58.8	72.3	0.39	88.2	6.5	51.0	9.55	9.38	2L	
820075 34		6/ VD76692	CLUB	60.8	70.4	0.37	86.9	7.2	52.8	9.20	9.14	6L Q-FYELD	
820076 37		5/ VD78181	CLUB	62.4	74.0	0.37	92.0	7.5	48.8	9.62	9.59	1L E-CODI	
820077 38		6/ VD78193	CLUB	61.2	70.6	0.37	87.3	7.4	49.2	9.59	9.54	1L Q-FYELD	
820078 39		6/ VB79342	HW	62.0	71.1	0.38	86.8	8.0	54.7	8.86	8.86	4L	
820079 40		6/ WA6581	SWW	61.6	70.3	0.38	86.6	7.1	51.9	9.46	9.36	1L	
820080 41		VH76297	SWW	60.0	69.2	0.40	83.5	7.2	53.3	9.59	9.50	3L Q-FYELD	
820081 42		VH76279	SWW	62.0	68.9	0.37	85.6	7.3	53.9	9.37	9.30	6L Q-FYELD	
820082 43		6/ VH79085	SWW	60.4	70.6	0.40	85.6	7.3	54.1	9.46	9.39	3L	
820083 44		5/ VH79121	SWW	62.0	72.1	0.41	86.9	7.6	52.7	9.11	9.07	3L	
820084 45		6/ VH79155	SWW	61.6	71.5	0.42	85.6	7.1	53.4	8.90	8.80	3L	
820085 46		VH79309	HW	61.2	69.9	0.42	83.5	7.3	55.2	8.89	8.83	5L Q-FYELD	
820086 47		VH78119	SWW	64.0	69.9	0.41	84.1	7.7	53.3	9.41	9.38	4L Q-FYELD	
820087 48		6/ VJ79132	SWW	61.2	71.1	0.39	86.7	7.4	52.5	9.27	9.21	4L	
820088 49		5/ VJ80156	SWW	59.6	72.4	0.37	89.4	7.6	52.4	9.60	9.56	3L E-CODI	
820089 50		6/ VH80214	SWW	62.0	68.9	0.37	85.2	7.8	51.9	9.31	9.29	5L Q-FYELD	
820090 51		5/ VH80368	SWW	62.4	72.7	0.41	87.6	7.2	52.8	9.30	9.21	3L	
820091 52		5/ VH80390	SWW	61.2	72.2	0.40	87.3	7.1	52.9	9.37	9.28	6L	
820092 53		6/ V180085	SWW	60.8	71.1	0.41	85.7	8.2	51.3	9.52	9.55	2L E-CODI	
820093 54		6/ VH80412	SWW	62.8	71.1	0.40	85.9	7.4	52.2	9.35	9.28	5L E-CODI	
820094 55		5/ VH80487	SWW	61.2	73.2	0.42	87.5	7.1	52.9	8.97	8.88	2L	
820095 56		5/ VH80505	SWW	62.4	72.3	0.42	86.7	7.8	51.5	9.64	9.62	2L	
820096 57		5/ VH80715	SWW	61.2	71.5	0.37	88.6	7.7	53.0	9.41	9.38	5L	
820097 58		6/ VH80717	SWW	61.2	71.3	0.43	84.5	7.3	52.6	9.51	9.44	3L	
820098 59		6/ VH80833	SWW	60.0	70.2	0.40	85.2	7.5	52.5	9.05	8.99	4L	
820099 CERCO		5/ C1015922	HRW	61.6	70.4	0.39	85.5	8.3	55.7	8.79	8.81	5L	
820100 61		6/ VH76472	SWW	62.0	70.0	0.38	85.9	7.7	52.9	9.60	9.57	4L Q-FYELD, E-CODI	
820101 62		VH80355	HW	61.6	69.0	0.43	81.9	8.0	54.5	8.87	8.87	4L Q-FYELD	
820102 63		5/ VM801034	SWW	62.0	72.5	0.41	87.4	7.1	53.4	9.66	9.56	3L E-CODI	
820103 64		6/ VM801048	SWW	61.2	71.1	0.41	85.7	7.0	53.7	9.35	9.24	3L	
820104 65		5/ VJ80172	SWW	60.4	73.6	0.39	90.0	7.2	52.9	9.29	9.20	2L	

1/ Observed Values Corrected to 14% Moisture Basis.

5/ Particularly Promising Overall Quality Characteristics.

3/ Absorption at 14% Moisture Corrected to 8% Protein.

6/ Promising Overall Quality Characteristics.

4/ Observed Values Corrected to 8% Protein.





NURSCO 3

POMEROY, WA

C.J. PETERSON

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	CODI	CODIC	MTYPE	RMKS
						1/		1/			4/		
820105 66		VH80267	SWW	60.4	69.7	0.40	84.4	7.9	55.1	9.12	9.11	6LQ-FYELD	
820106 67		VH80374	SWW	61.6	69.5	0.39	84.6	7.4	52.2	8.92	8.86	5LQ-FYELD	
820107 68		VH80488	HW	60.0	70.5	0.40	84.9	6.6	53.6	8.81	8.70	4L	
820108 69		VH80499	SWW	61.2	73.3	0.40	89.0	8.6	51.3	9.76	9.83	1LE-CODI	
820109 70		VH80621	CLUB	61.2	72.2	0.41	87.0	8.1	52.2	9.34	9.34	4L	
820110 71		VJ80628	SWW	62.8	68.8	0.35	86.5	6.8	52.3	9.57	9.44	2LLOW FYELD	
820111 72		VH80635	SWW	61.2	69.9	0.39	85.2	7.9	52.5	9.61	9.60	4LQ-FYELD	
820112 73		VH80736	SWW	60.8	69.4	0.40	83.7	7.1	52.9	8.96	8.86	2LQ-FYELD	
820113 74		VM801041	HW	61.2	66.6	0.37	82.4	7.0	56.8	8.96	8.88	4LLOW FYELD	
820114 75		VH80752	SWW	61.2	71.8	0.37	88.7	7.0	52.5	9.14	9.03	5L	
820115 76		VH81036	SWW	62.4	70.8	0.37	87.8	7.9	54.4	9.40	9.39	4M	
820116 77		VH81468	SWW	61.6	69.5	0.42	83.1	7.7	54.4	9.14	9.10	7MQ-FYELD	
820117 78		VH81535	SWW	60.4	71.5	0.40	86.9	7.7	52.8	9.40	9.37	4L	
820118 79		VD81110	CLUB	60.4	70.5	0.42	83.8	6.9	49.8	9.67	9.60	2LQ-FYELD	
820119 80		VD81002	CLUB	60.4	68.2	0.45	79.4	7.4	48.7	9.42	9.38	1LLOW FYELD	
820120 81		VD81004	CLUB	60.4	70.5	0.43	83.4	7.3	50.4	9.42	9.38	2LQ-FYELD	
820121 82		VD81108	CLUB	62.0	73.2	0.42	87.8	7.3	52.6	9.50	9.47	4L	
820122 83		VJ81009	SWW	60.8	71.2	0.42	85.1	8.0	52.6	9.09	9.09	3L	
820123 84		VJ81014	SWW	60.8	71.7	0.39	87.5	8.0	52.0	9.45	9.45	2L	
820124 85		VJ81022	SWW	61.6	71.4	0.41	86.0	7.7	51.3	9.69	9.65	2LE-CODI	
820125 86		VH81024	SWW	63.2	69.6	0.40	83.9	7.5	54.2	9.30	9.24	6LQ-FYELD	
820126 87		VH81030	SWW	63.6	71.2	0.41	85.4	9.0	52.6	9.47	9.58	3M	
820127 88		VH81072	SWW	61.2	68.6	0.43	80.8	8.1	52.4	9.52	9.54	3LLOW FYELD	
820128 89		VJ81146	SWW	60.4	70.6	0.47	81.3	7.8	52.8	9.14	9.12	3LQ-FYELD	
820129 90		VJ81150	SWW	58.2	72.3	0.47	83.2	7.8	52.8	9.44	9.42	2L	
820130 91		VH81279	HW	57.6	71.3	0.45	83.5	7.8	54.1	8.61	8.60	3LHard type	
820131 92		VH81347	HW	62.0	71.5	0.44	84.0	7.8	57.5	8.42	8.41	6LHard type	
820132 93		VH81361	SWW	62.0	69.2	0.46	79.7	7.8	54.2	9.11	9.09	6LLOW FYELD	
820133 94		VH81371	SWW	60.4	68.1	0.41	81.7	7.5	52.7	9.32	9.27	5LLOW FYELD	
820134 95		VH81373	SWW	60.0	68.3	0.43	80.7	8.0	51.8	9.21	9.21	2LLOW FYELD	
820135 96		VH81407	SWW	62.4	69.1	0.43	81.8	8.4	51.2	9.32	9.37	2LLOW FYELD	"RED"
820136 97		VH81408	HRW	62.0	69.2	0.38	85.0	9.4	56.2	8.50	8.61	4MLOW FYELD	
820137 98		VH81423	SWW	61.2	70.7	0.36	88.0	8.1	51.7	9.36	9.37	8L	
820138 99		VH81426	SWW	61.2	67.9	0.41	81.1	7.9	53.8	9.31	9.30	4LLOW FYELD	
820139 100		VH81444	SWW	60.0	69.8	0.44	81.8	7.6	52.1	9.39	9.34	3LLOW FYELD	



NURSCO 3

POMEROY, WA

C.J. PETERSON

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	1/			FPROT	MABSC	CODI	CODIC MTYPE RMKS		
								1/	3/	4/						
820140 101		VH81481	SWW	62.0	69.6	0.40	84.2	7.3	52.4	9.14		9.14		9.06	5L Q-FYELD	
820141 102		VH81505	SWW	62.0	68.7	0.42	81.7	7.8	53.9	9.19		9.19		9.17	3M LOW FYELD	
820142 103		VH81533	SWW	61.6	70.1	0.41	84.2	7.6	54.2	8.91		8.91		8.87	6L Q-FYELD	
820143 104		VJ81545	SWW	61.6	72.6	0.38	89.2	9.0	52.1	9.17		9.17		9.28	6L	
820144 105		VJ81581	SRW	63.2	70.6	0.37	87.4	8.2	54.0	9.15		9.15		9.17	6L "RED"	
820145 106		VH77267	SWW	60.0	68.0	0.38	83.4	7.1	51.4	9.40		9.40		9.30	5L LOW FYELD	
820146 107		VM82760	SWW	60.8	69.2	0.40	83.6	7.5	52.1	9.32		9.32		9.27	8L LOW FYELD	
820147 108		OR67237	SWW	61.6	68.9	0.42	81.8	6.9	53.8	8.77		8.77		8.65	6L LOW FYELD	
820148 109		VH80733	SWW	61.6	69.8	0.37	86.1	7.5	54.6	8.97		8.97		8.92	6L Q-FYELD	
820149 110		VH75298	SWW	61.6	69.7	0.38	85.8	7.6	52.0	9.29		9.29		9.24	5L Q-FYELD	
820150 111		VH76472	SWW	61.6	70.8	0.38	86.9	7.8	52.2	9.60		9.60		9.58	5L	
820151 112		VH76474	SWW	58.4	72.7	0.38	89.8	6.8	53.2	9.12		9.12		8.99	2L	
820152 113		VJ76485	SWW	60.4	70.3	0.39	85.5	7.3	53.2	9.46		9.46		9.39	8L	
820153 114		VH76678	SRW	62.0	74.1	0.38	91.6	7.4	53.3	9.40		9.40		9.33	3L "RED" E-Milling	
820154 115		VH81496	SWW	63.2	67.9	0.37	83.7	7.4	53.2	9.29		9.29		9.22	3L LOW FYELD	
820155 116		VH181486	SWW	61.2	74.0	0.43	88.2	7.9	51.6	9.37		9.37		9.36	5L E-Milling	
820156 117		VH81054	SWW	61.2	72.9	0.40	88.2	7.4	52.2	9.64		9.64		9.57	3L E-CODI	
820157 118		WA6814	SWW	60.4	74.1	0.42	88.7	7.0	51.7	9.87		9.87		9.76	1L E-Milling&CODI	
820158 119		VH179155	SWW	62.4	71.7	0.40	87.0	6.8	54.7	9.11		9.11		8.98	6L	
820159 120		VH78879	SWW	61.4	72.0	0.39	88.1	7.4	53.2	9.59		9.59		9.52	3L	
820160 150		VJ81019	SRW	59.2	67.7	0.43	80.0	6.9	53.7	9.06		9.06		8.94	3L LOW FYELD	
820161 151		VJ81169	HRW	62.4	71.9	0.40	86.5	6.8	58.4	8.52		8.52		8.43	6L Hard Type	
820162 152		VH81249	HRW	63.6	69.2	0.40	83.9	7.0	57.8	8.66		8.66		8.58	6L (Possible	
820163 153		VH81319	HRW	63.6	71.0	0.35	88.2	7.3	56.2	9.16		9.16		9.11	6L LOW FYELD	
820164 154		VH81374	HRW	60.8	63.9	0.35	80.8	7.2	54.3	9.39		9.39		9.32	8L LOW FYELD	
820165 155		VH81509	HRW	60.8	69.7	0.41	83.9	6.6	56.8	8.75		8.75		8.64	8L LOW FYELD	
820166 156		VH81522	HRW	61.2	69.4	0.42	82.7	7.8	57.0	8.71		8.71		8.70	8L LOW FYELD	

## COMMENTS:

Many of these selections have good to outstanding quality characteristics. Those that are noteworthy are:  
WA6585, VD78181, VJ80156, VH80368, VH80390, VJ80172, VH80499, VJ81022, VH76474, VH81486,  
VH81054, WA6814. Selection VH81319 appears to have dual properties, based on its cookie spread for a  
hard red winter.





NURSCO 4

MORO, OR

C.R. ROHDE

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/
820167	HYSLOP	C1014564	SWW	61.1	69.7	0.43	78.5	7.6	48.9
820168	STEPHENS	C1017596	SWW	61.2	71.5	0.42	81.2	7.6	47.2
820169	CREW	C1017951	CLUB	60.1	72.1	0.41	84.1	6.5	48.0
820170	TYEE	C1017773	CLUB	58.7	72.4	0.42	84.2	6.7	48.7
820171	DAWS	C1017419	SWW	61.2	70.5	0.43	79.1	6.9	49.7
820172	KHARKOF	C1001442	HRW	63.5	69.4	0.43	79.4	8.7	55.1
820173	FARO	C1017590	CLUB	64.3	69.1	0.39	80.8	7.1	49.8
820174	NUGAINES	C1013968	SWW	64.5	70.3	0.41	79.7	7.1	50.1
820175	LEWJAIN	C1017909	SWW	62.0	71.6	0.41	80.7	6.9	50.5
820176	MCDERMID	C1014565	SWW	61.3	68.7	0.39	76.8	7.4	48.4
820177	JACMAR		CLUB	58.4	70.9	0.43	80.5	7.9	48.0
820178	YAY/YMH//RIEB/YMH/3/REW, SEL 46-2	5/ OR0794	SWW	62.6	72.3	0.42	80.9	6.7	48.4
820179	C1014482/MORO, SEL E109	5/ OR0797	SWW	61.6	71.8	0.39	83.0	6.8	48.3
820180	PAHA/SEL 65-2124(M766-432), A-1	5/ OR0814	SWW	59.3	72.8	0.44	82.8	7.2	46.6
820181	SUWON 92/3*OMAR//MORO, SEL 142	5/ OR7142	CLUB	60.3	71.3	0.45	80.5	6.9	46.9
820182	PAHA/OR6857, SEL 204	5/ OR7792	CLUB	61.2	73.1	0.41	85.5	6.9	46.9
820183	REW/LUKE, SEL 305	5/ OR7794	SWW	62.3	72.6	0.41	82.6	7.0	49.1
820184	BEZ/SPRAGUE, SEL 18-24	5/ OR7921	SRW	62.2	71.4	0.45	79.6	7.2	49.3
820185	CLARIFEN/WA5836, SEL 27-26	OR7925	HRW	60.3	69.0	0.45	78.0	7.7	51.1
820186	BEZ/REW, SEL 42-31	OR7930	SRW	61.4	71.4	0.44	79.4	7.5	49.4
820187	HYS/YAY/WA4995/ID71043, SEL 11-7	OR7942	SRW	62.2	70.6	0.43	80.8	7.7	50.3
820188	DRC/68-23, OWM68109-1M6, R-241	6/ OR7956	SWW	58.0	71.0	0.44	79.1	7.2	46.8
820189	HYS/YAY/WA4995/3/CERCO, W-1980	5/ OR7996	SWW	60.8	69.8	0.46	76.2	7.8	48.1
820190	HYS/NOR/CAMA/3/SM-4(7436)M76-502, A-1358	6/ OR8188	SWW	61.5	71.4	0.45	78.1	7.1	46.8
820191	YAMHILL/HYSLOP	5/ OR68007	SWW	61.6	74.8	0.46	84.5	7.4	47.4

1/ Observed Values Corrected to 14% Moisture Basis.

5/ Particularly Promising Overall Quality Characteristics.

3/ Absorption at 14% Moisture Corrected to 7% Protein.

6/ Promising Overall Quality Characteristics.

4/ Observed Values Corrected to 7% Protein.



NURSCO 4

MORO, OR

C.R. ROHDE

LABNUM	VARIETY	IDNO	CLASS	MTYPE	CODI	CODIC	CAVOL	SCSOR	RMKS
						4/			
820167	HYSLOP	C1014564	SWW	3L	8.92	9.01	1296	77.0	
820168	STEPHENS	C1017596	SWW	2L	9.26	9.33	1356	80.0	
820169	TREE	C1017951	CLUB	2L	9.12	9.09	1361	82.0	
820170	TYEE	C1017773	CLUB	2L	9.49	9.47	1371	81.0	
820171	DAWS	C1017419	SWW	2L	9.16	9.15	1336	78.0	
820172	KHARKOF	C1001442	HRW	3L	8.21	8.35	1181	66.0	
820173	FARO	C1017590	CLUB	3L	9.29	9.29	1351	80.0	
820174	NUGAINES	C1013968	SWW	3L	9.10	9.11	1321	79.0	
820175	LEWJAIN	C1017909	SWW	3L	9.21	9.20	1296	77.0	
820176	MCDERMID	C1014565	SWW	2L	9.30	9.34	1331	81.0	
820177	JACMAR		CLUB	3L	9.46	9.53	1346	79.0	
820178	YAY/YMH//RIEB/YMH/3/REW, SEL 46-2	OR0794	SWW	2L	9.10	9.07	1406	83.0	
820179	C1014482/MORO, SEL E109	OR0797	SWW	2L	9.41	9.39	1371	81.0	
820180	PAHA/SEL 65-2124(M766-432), A-1	OR0814	SWW	2L	9.21	9.23	1386	83.0	
820181	SUWON 92/3*OMAR//MORO, SEL 142	OR7142	CLUB	2L	9.10	9.09	1401	81.0	
820182	PAHA/OR6857, SEL 204	OR7792	CLUB	2L	9.29	9.28	1406	82.0	Outstanding
820183	REW/LUKE, SEL 305	OR7794	SWW	2L	8.95	8.95	1366	80.0	
820184	BEZ/SPRAGUE, SEL 18-24	OR7921	SRW	2L	8.96	8.98	1316	75.0	Soft Red
820185	CLARIFEN/WA5836, SEL 27-26	OR7925	HRW	6L	8.22	8.28	1216	67.0	Hard, P-CODI&SCSOR
820186	BEZ/REW, SEL 42-31	OR7930	SRW	2L	8.81	8.87	1281	77.0	Soft Red
820187	HYS/YAY/WA4995/ID71043, SEL 11-7	OR7942	SRW	6L	8.80	8.88	1256	74.0	Soft Red
820188	DRC/68-23. OWM68109-1M6, R-241	OR7956	SWW	2L	9.15	9.17	1326	78.0	Q-MSCOR
820189	HYS/YAY/WA4995/3/CERCO, W-1980	OR7996	SWW	4L	9.35	9.44	1356	82.0	
820190	HYS/NOR/CAMA/3/SM-4(7436)M76-502, A-1358	OR8188	SWW	5L	8.99	9.00	1286	77.0	
820191	YAMHILL/HYSLOP	OR68007	SWW	2L	9.15	9.19	1346	80.0	Excellent

COMMENTS: Note that OR7925 is hard in texture and that OR7921, OR7930, and OR7942 are soft reds.



NURSCO 5

PENDLETON, OR

C.R. ROHDE

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD FASH	MSCOR	FPROT	MABSC	MTYPE	CODI	CODIC	RMKS
					1/		1/	3/			4/	
820192	HYSLOP	C1014564	SWW	61.6	72.4	0.41	85.0	8.9	51.2	3L	8.80	8.79
820193	STEPHENS	C1017596	SWW	59.8	68.2	0.39	79.6	8.9	50.2	2L	9.20	9.20
820194	CREW	C1017951	CLUB	60.5	70.8	0.37	86.1	8.9	48.7	2L	9.11	9.11
820195	TYEE	C1017773	CLUB	59.5	71.1	0.34	87.6	8.4	49.8	3L	9.14	9.09
820196	DAWS	C1017419	SWW	61.2	69.8	0.36	82.8	8.4	49.0	3L	9.11	9.05
820197	KHARKOF	C1001442	HRW	63.4	70.8	0.35	86.6	10.8	57.1	2H	8.01	8.16
820198	FARO	C1017590	CLUB	60.6	72.7	0.34	90.2	9.6	48.3	2M	9.10	9.14
820199	NUGAINES	C1013968	SWW	63.7	72.6	0.36	86.5	8.6	49.5	3M	8.81	8.77
820200	LEWJAIN	C1017909	SWW	63.0	73.4	0.37	87.5	9.0	51.7	3M	9.06	9.06
820201	MCDERMID	C1014565	SWW	61.3	73.8	0.38	84.2	8.7	49.7	3L	9.21	9.18
820202	JACMAR		CLUB	58.9	72.5	0.39	84.1	9.0	48.2	2M	9.45	9.45
820203	YAY/YMH//RIEB/YMH/3/REW, SEL 46-2	5/0R0794	SWW	64.6	72.5	0.37	86.7	9.0	49.1	2M	9.12	9.12
820204	C1014482/MORO, SEL E109	5/0R0797	SWW	64.0	71.5	0.35	86.7	8.4	51.3	4M	9.06	9.00
820205	SUWON 92/3*OMAR//MORO, SEL 142	5/0R7142	CLUB	60.5	73.3	0.36	90.2	8.9	47.9	2M	8.84	8.83
820206	PAHA/OR6857, SEL 204	5/0R7792	CLUB	62.8	74.1	0.37	90.8	8.9	47.4	2L	9.20	9.19
820207	REW/LUKE, SEL 305	5/0R7794	SWW	62.6	72.4	0.35	87.3	8.6	49.0	3L	9.14	9.09
820208	CLARIFEN/WA5836, SEL 27-26	OR7925	HRW	59.6	69.5	0.35	83.7	8.7	54.5	6L	8.04	8.01
820209	BEZ/REW, SEL 42-31	OR7930	HRW	62.3	72.4	0.36	86.8	9.0	51.7	3L	8.54	8.54
820210	HYS/YAY/WA4995/ID71043, SEL 11-7	OR7942	HRW	63.5	74.1	0.35	91.2	9.6	54.6	6L	8.60	8.67
820211	DRC/68-23, OWM68109-1M6, R-241	6/0R7956	SWW	58.7	72.7	0.39	84.9	9.2	51.4	2M	8.86	8.88
820212	HYS/YAY/WA4995/3/CERCO, W-1980	6/0R7996	SWW	61.3	71.7	0.37	84.9	8.7	51.7	6L	9.01	8.98
820213	HYS/NOR/CAMA/3/SM-4(7436)M76-502, A-1358	6/0R8188	SWW	61.3	72.3	0.39	85.2	8.6	51.9	3L	8.79	8.74
820214	YAMHILL/HYSLOP	5/0R68007	SWW	61.7	74.2	0.38	87.2	9.0	51.9	2L	8.84	8.84
820215	FW75536 F701	6/	SWW	61.5	71.6	0.35	85.7	9.5	52.9	3M	8.75	8.80
820216	A-613 OWM319	6/	SRW	59.3	71.6	0.35	85.6	8.8	49.8	2M	9.12	9.10

1/ Observed Values Corrected to 14% Moisture Basis. 5/ Particularly Promising Overall Quality Characteristics.

3/ Absorption at 14% Moisture Corrected to 9% Protein. 6/ Promising Overall Quality Characteristics.

4/ Observed Values Corrected to 9% Protein.

COMMENTS: All the soft white and club selections in this nursery are promising in overall quality. Three selections included were HRW's, two of these (OR7930 and OR7942) have very good flour milling characteristics but because of their low protein content they were not baked in a bread test. The third selection, OR7925, is low in flour yield.





USDA, ARS  
WESTERN WHEAT QUALITY LAB.  
PULLMAN, WA

PNW CROP QUALITY SURVEY  
(Lab. No. 82430-440 & 232-234, Respectively)

NURSCO 015 & 007

PNW REGION	NO.	CLASS	TWT	WPROT <sup>1/</sup>	F.N. <sup>1/</sup>	FYELD	MSCOR	FASH <sup>1/</sup>	FPROT <sup>1/</sup>	W.G.	FARINOGRAPH <sup>1/</sup>			VISC	CODI	CAVOL	SCSOR	WTIN	NOSCO
											FABS	FPEAK	FSTAB						
North Idaho	1	SWW	62.0	9.7	325	71.0	81.6	0.41	8.0	27.6	53.5	1.0	2.9	59	8.77	1268	86.0	361	79
South Idaho	2	SWW	61.5	10.2	348	70.6	80.3	0.42	8.3	31.7	54.5	1.8	1.8	45	9.14	1283	77.0	359	77
Palouse	3	SWW	62.2	9.8	344	70.7	81.1	0.41	8.0	29.2	54.3	1.0	2.4	66	8.87	1208	68.0	357	70
Big Bend	4	SWW	60.9	10.7	323	69.6	78.4	0.42	8.9	32.0	54.7	2.2	3.0	71	8.96	1258	75.0	367	78
Walla Walla	5	SWW	60.7	10.9	382	69.9	80.0	0.38	8.7	30.9	52.7	1.0	1.1	87	8.94	1263	72.0	362	80
North Pendleton	6	SWW	60.5	10.0	343	71.9	82.7	0.38	8.1	30.0	51.3	1.1	2.0	51	9.10	1318	75.0	358	78
Columbia River	7	SWW	59.9	9.5	348	71.3	80.6	0.40	7.6	26.3	51.1	1.0	1.0	39	9.01	1398	84.0	363	78
Willamette Valley	8	SWW	61.1	9.4	312	71.0	81.5	0.40	7.6	28.8	51.8	1.1	1.0	43	9.04	1408	84.0	368	82
Waterville	9	SWW	62.8	9.7	356	68.3	77.1	0.38	7.8	28.5	51.7	1.0	3.1	63	9.12	1143	65.0	376	78
Horse Heaven	10	SWW	59.0	9.9	351	71.9	82.5	0.41	8.0	28.0	51.4	1.0	1.0	43	9.13	1338	79.0	374	76
Blue Mountain	11	SWW	61.8	9.9	357	71.0	80.8	0.42	8.0	29.2	53.5	1.0	1.5	57	8.79	1208	69.0	367	77
Big Bend	4	CLUB	60.0	10.5	314	72.7	82.6	0.45	8.9	34.2	51.8	1.0	2.5	75	9.05	1378	80.0	355	75
Columbia River	7	CLUB	59.9	8.1	268	71.1	84.0	0.38	6.1	21.7	49.3	1.0	1.2	31	9.29	1328	78.5	349	74
Waterville	9	CLUB	60.0	10.7	292	70.9	79.8	0.44	8.9	34.1	50.5	2.9	4.2	79	9.24	1318	77.0	368	77
Average -- Soft White			61.1	10.0	344	70.7	80.6	0.40	8.1	29.3	52.8	1.2	1.9	57	8.99	1281	76.0	365	78
Club			60.0	9.8	291	71.5	82.1	0.42	8.0	30.0	50.5	1.6	2.6	62	9.19	1341	78.5	357	75

<sup>1/</sup> 14% Moisture Basis

TWT = Test weight (lbs./bushel)  
WPROT = Wheat Protein (%)  
F.N. = Falling Number (Seconds)  
FYELD = Flour Yield (%)  
MSCOR = Milling Score  
FASH = Flour Ash (%)

FPROT = Flour Protein (%)  
W.G. = Wet Gluten (%)  
FABS = Farinograph Absorption (500 B.U., %)  
FPEAK = Farinograph Peak Time (Min.)  
FSTAB = Farinograph Stability (Min.)  
VISC = Degrees MacMichael

CODI = Cookie Diameter (cm)  
CAVOL = Japanese Sponge Cake Volume(cc)  
SCSOR = Sponge Cake Score  
WTIN = Udon Noodle Weight Increase(%)  
NOSCO = Udon Noodle Score

These milling and baking tests were done in co-operation with the PNW Grain Council. Samples are composites made from country elevator samplings during harvest representing 11 regions of Washington, Oregon, and Idaho soft white wheat production of the 1982 crop. Overall quality, cookie, sponge cake baking, and noodle making was good for most regions. The milling quality is down slightly from last year.



NURSCO 8

DAVIS, CA

C.O. QUALSET

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE
						1/		1/	3/	
820242	(TOB66 X R50)INIA	6/ 1	HRS	62.8	72.4	0.40	87.3	10.3	58.6	3M
820243	(TOB66 X R50)INIA	6/ 3	HRS	62.0	71.0	0.39	86.2	10.7	58.3	3M
820244	(166 X BB'S')ANZA	5/ 5	HRS	63.2	72.7	0.39	88.2	11.0	59.4	3H
820245	(166 X BB S')ANZA	6/ 7	HRS	63.6	71.3	0.44	83.8	9.9	58.1	7M
820246	AZTECA 67 X ANZA	8	HRS	63.6	69.6	0.44	82.1	10.1	59.2	4M
820247	(TOB-CNO)ANZA	5/ 9	HRS	63.2	72.2	0.38	87.8	11.5	57.7	3M
820248	(C113232 X R50)ANZA	15	HWS	62.4	71.6	0.46	83.2	10.5	57.7	3M
820249	(C113232 X R50)ANZA	6/ 17	HRS	62.8	69.9	0.40	84.5	10.6	57.8	3M
820250	ANZA (C1015284)	19	HRS	63.2	73.1	0.40	87.8	10.3	57.7	3M
820251	YECORA ROJO	20	HRS	62.8	70.0	0.46	81.4	10.4	59.1	8H
820252	SHASTA (C1003976)	21	HRS	64.4	72.1	0.46	83.7	11.0	58.7	4H
820253	YOLO	22	HRS	62.8	71.9	0.40	86.4	10.1	59.6	4M
820254	RULOFEN*ANZA2	25	HRS	64.0	72.1	0.40	86.8	9.2	57.6	3M
820255	JILGUERO S'*(D6301 X NAI60)	6/ 27	HRS	63.2	72.1	0.40	86.7	10.8	58.5	4M
820256	JILGUERO(D6301 X NAI60)	28	HRS	63.6	70.2	0.44	82.8	9.9	58.3	6M
820257	JILGUERO S'ANZA	29	HRS	65.2	72.8	0.41	86.8	10.4	58.8	4M
820258	STURDY*ANZA	30	HRS	63.2	70.6	0.46	82.2	11.1	59.7	2H
820259	TZPP*ANZA2	34	HRS	62.0	71.6	0.42	85.3	10.7	58.7	2H
820260	TZPP*ANZA2	5/ 35	HRS	64.0	72.5	0.45	84.7	10.3	60.6	4H
820261	TZPP*ANZA2	6/ 36	HRS	62.8	71.6	0.45	83.7	11.1	60.6	4H
820262	TZPP*ANZA2	5/ 37	HRS	63.6	72.1	0.41	86.4	11.0	61.4	3H
820263	TZPP*ANZA2	38	HRS	60.8	70.0	0.45	82.0	10.5	60.8	3M
820264	TZPP*ANZA2	40	HRS	62.4	70.3	0.44	82.7	10.2	60.1	8M
820265	TZPP*ANZA2	5/ 41	HRS	63.6	72.8	0.40	87.5	10.3	61.0	4M
820266	TZPP*ANZA2	5/ 42	HRS	62.4	72.2	0.46	83.9	11.7	61.8	5H
820267	TZPP*ANZA2	6/ 43	HRS	63.6	73.7	0.44	86.4	10.4	59.4	5H
820268	TZPP*ANZA2	44	HRS	64.0	72.3	0.44	84.9	9.8	57.5	4M
820269	TZPP*ANZA2	5/ 45	HRS	64.8	73.7	0.43	87.1	10.4	59.3	3M
820270	TZPP*ANZA2	5/ 47	HRS	63.6	72.4	0.43	85.6	10.2	60.3	5H
820271	((BC60 X C113232)166)ANZA UC497	48	HRS	64.4	72.6	0.39	87.7	10.4	57.8	3M
820272	ANZA2*PI190982	49	HRS	62.8	71.0	0.45	82.9	10.4	59.1	3H
820273	(PENJ62*PI190982)ANZA	50	HRS	64.0	72.6	0.47	83.5	9.5	57.1	2M
820274	((SEL14*BURT2-2-16)166)TANORI 71	5/ 51	HRS	64.0	73.1	0.44	85.5	9.5	57.4	4M
820275	((SEL14*BURT2-2-16)166)ANZA	6/ 52	HRS	65.6	72.3	0.45	84.5	10.2	57.1	4M
820276	WW15*H226	53	HRS	64.0	73.9	0.38	89.5	10.9	59.6	2H

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 10% Protein.

4/ Observed Values Corrected to 10% Protein.

5/ Particularly Promising Overall Quality Characteristics.

6/ Promising Overall Quality Characteristics.





NURSCO 8

DAVIS, CA

C.O. QUALSET

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR	RMKS
					3/			4/		
820242	(TOB66 X R50)INIA	1	HRS	61.6	61.3	2.5	1025	1006	3	
820243	(TOB66 X R50)INIA	3	HRS	59.2	58.5	2.7	995	952	2	
820244	(166 X BB'S')ANZA	5	HRS	61.1	60.1	2.4	1025	963	2	
820245	(166 X BB S')ANZA	7	HRS	62.2	62.3	4.5	905	911	2Q-LVOL	
820246	AZTECA 67 X ANZA	8	HRS	61.5	61.4	2.9	955	949	4Q-FYELD&BCRGR	
820247	(TOB-CNO)ANZA	9	HRS	61.4	59.9	2.5	1080	987	2	
820248	(C113232 X R50)ANZA	15	HWS	60.4	59.9	2.6	940	909	4Q-LVOL&BCRGR	
820249	(C113232 X R50)ANZA	17	HRS	60.6	60.0	2.1	1025	988	3Q-FYELD	
820250	ANZA (C1015284)	19	HRS	59.2	58.9	2.0	1010	991	4	
820251	YECORA ROJO	20	HRS	64.2	63.8	7.1	1020	995	3	
820252	SHASTA (C1003976)	21	HRS	62.9	61.9	3.7	990	928	3	
820253	YOLO	22	HRS	60.9	60.8	2.5	1045	1039	6	
820254	RULOFEN*ANZA2	25	HRS	59.0	59.8	2.6	935	985	6P-BCRGR	
820255	JILGUERO S'*(D6301 X NAI60)	27	HRS	61.5	60.7	3.0	1000	950	3	
820256	JILGUERO(D6301 X NAI60)	28	HRS	61.4	61.5	3.7	940	946	6P-BCRGR	
820257	JILGUERO S' *ANZA	29	HRS	61.9	61.5	3.0	1005	980	5P-BCRGR	
820258	STURDY*ANZA	30	HRS	61.0	59.9	2.0	1045	977	4P-BCRGR	
820259	TZPP*ANZA2	34	HRS	62.1	61.4	2.3	1015	972	6P-BCRGR	
820260	TZPP*ANZA2	35	HRS	63.1	62.8	3.4	1040	1021	2	
820261	TZPP*ANZA2	36	HRS	63.9	62.8	3.3	1055	987	2	
820262	TZPP*ANZA2	37	HRS	63.6	62.6	2.9	1090	1028	2	
820263	TZPP*ANZA2	38	HRS	62.5	62.0	2.0	945	914	6P-LVOL&BCRGR	
820264	TZPP*ANZA2	40	HRS	67.0	66.8	6.6	990	978	4Q-BCRGR	
820265	TZPP*ANZA2	41	HRS	64.0	63.7	3.3	1055	1036	2Outstanding overall	
820266	TZPP*ANZA2	42	HRS	66.7	65.0	5.3	1145	1040	2	
820267	TZPP*ANZA2	43	HRS	64.5	64.1	4.5	998	973	3Outstanding millin	
820268	TZPP*ANZA2	44	HRS	60.5	60.7	3.5	950	962	6P-BCRGR	
820269	TZPP*ANZA2	45	HRS	61.9	61.5	2.5	1035	1010	1Outstanding overall	
820270	TZPP*ANZA2	47	HRS	65.7	65.5	6.0	983	971	2	
820271	((BC60 X C113232)166)ANZA UC497	48	HRS	60.4	60.0	2.9	950	925	5P-BCRGR	
820272	ANZA2*PI190982	49	HRS	63.2	62.8	3.5	963	938	4P-BCRGR	
820273	(PENJ62*PI190982)ANZA	50	HRS	58.8	59.3	1.6	810	841	8VP-LVOL&BCRGR	
820274	((SEL14*BURT2-2-16)166)TANOR1 71	51	HRS	59.1	59.6	3.2	940	971	2	
820275	((SEL14*BURT2-2-16)166)ANZA	52	HRS	60.0	59.8	2.7	925	913	1	
820276	WW15*H226	53	HRS	61.7	60.8	2.1	910	854	3P-MTIME&LVOL	



NURSCO 8

DAVIS, CA

C.O. QUALSET

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE
						<u>1/</u>		<u>1/</u>	<u>3/</u>	
820277	CUCKOO'S'	54	HWS	62.4	67.9	0.44	80.1	9.4	60.9	5H
820278	(CNO-INIA'S')BB	56	HWS	63.2	67.5	0.42	81.1	9.5	60.3	7M
820279	VEERY'S'	57	HRS	62.8	69.9	0.47	80.9	10.5	58.5	6M
820280	(T.AEST-MOCHIS 73)*NAC 76	58	HWS	63.2	69.7	0.45	81.9	11.0	58.2	2H
820281	LRR ANZA	<u>6/60</u>	HRS	63.2	72.9	0.42	86.8	9.8	57.7	3M



NURSCO 8

DAVIS, CA

C.O. QUALSET

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR	RMKS
					3/			4/		
820277	CUCKOO'S'	54	HWS	65.0	65.6	4.3	873	910	6P-LVOL&BCRGR	
820278	(CNO-INIA'S')BB	56	HWS	64.0	64.5	4.8	840	871	6P-LVOL&BCRGR	
820279	VEERY'S'	57	HRS	63.7	63.2	3.3	945	914	4P-LVOL&BCRGR	
820280	(T.AEST-MOCHIS 73)*NAC 76	58	HWS	62.9	61.9	2.7	940	878	5P-LVOL&BCRGR	
820281	LRR ANZA	60	HRS	59.7	59.9	2.3	980	992	3Q-MTIME&BCRGR	

## COMMENTS:

There are many selections in this group that are equal to or better than Yecoro Rojo and Shasta. Anza and Yolo are typically poor in bread making. The TZPP\*ANZA2 crosses (ID. No. 34-47) showed a wide variation in dough mixing and baking properties from very poor to outstanding. Several should make good candidates for variety development and further testing.

VP = Very Poor P = Poor Q = Questionable





NURSCO 9

DAVIS, CA

C.O. QUALSET

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	MTYPE
820282	(SON 64 X R50)166	6/1	HRS	64.0	70.2	0.44	82.5	10.5	60.8	7M
820283	APR BEARDED*166	6/2	HRS	63.6	72.0	0.39	87.4	11.1	60.1	8M
820284	BOB S'*ANZA	6/5	HRS	63.6	72.3	0.39	87.5	10.4	59.3	3M
820285	BOB S'*ANZA	6/6	HRS	64.4	72.3	0.41	86.7	9.3	59.9	4M
820286	BOB S'*ANZA	6/7	HRS	64.4	72.4	0.40	87.0	10.1	59.7	3H
820287	BOB S'*ANZA	8	HRS	64.8	71.5	0.40	86.2	9.4	58.6	4M
820288	NURI 70*ANZA	9	HRS	65.2	73.0	0.43	85.9	10.3	59.5	3M
820289	NURI 70*ANZA	10	HRS	64.8	73.2	0.40	87.9	11.6	57.1	3M
820290	AZTECA 67*ANZA	11	HRS	65.6	69.4	0.43	82.2	9.5	59.7	6M
820291	(TOB 66*CNO)ANZA	6/12	HRS	64.4	73.7	0.42	87.2	10.3	57.2	8M
820292	(INIA-CNO*CAL)ANZA	6/13	HRS	64.0	72.5	0.41	86.8	10.5	58.9	4M
820293	(INIA-CNO*CAL)ANZA	6/14	HRS	64.8	72.0	0.41	86.1	10.0	58.7	6M
820294	(INIA-CNO*CAL)ANZA	6/15	HRS	64.8	72.5	0.41	86.8	9.7	58.5	3M
820295	(INIA-CNO*CAL)ANZA	6/16	HRS	64.0	72.6	0.40	87.4	10.6	57.6	3M
820296	(INIA-CNO*CAL)ANZA	6/17	HRS	65.2	72.8	0.40	87.3	10.2	58.1	3M
820297	ANZA (C1015284)	18	HRS	64.8	72.1	0.40	86.5	9.0	57.4	2M
820298	YEGORA ROJO	19	HRS	62.8	69.7	0.43	82.5	10.8	60.5	8H
820299	(INIA-CNO*CAL)ANZA	22	HRS	66.0	71.4	0.42	84.8	9.3	56.9	5H
820300	(INIA-CNO*CAL)ANZA	23	HRS	66.8	70.8	0.41	85.0	10.1	59.8	6M
820301	(CNO X 166)ANZA	24	HRS	64.0	67.2	0.42	80.7	10.3	62.4	6H
820302	(CON S-12)ANZA	6/26	HRS	64.8	70.7	0.39	85.8	9.9	58.3	3M
820303	(CON S-12)ANZA	6/27	HRS	64.4	70.9	0.38	86.5	10.0	58.0	3M
820304	(CON S-12)ANZA	6/28	HRS	64.0	71.0	0.39	86.1	10.4	58.1	4M
820305	(ZAGREB 673/2 X 166)166R	6/30	SRS	64.0	70.3	0.39	85.8	11.2	55.3	6M
820306	ANZA*SARIC 70	6/32	HRS	64.4	72.1	0.42	86.0	10.8	56.7	4H
820307	ANZA*CAJENE	6/35	HRS	64.4	72.4	0.41	86.5	10.8	56.2	3M
820308	(C113232*R50)ANZA	36	HRS	64.0	71.6	0.43	84.5	10.3	57.2	4M
820309	KLEIN SENDERO*ANZA	41	HRS	65.2	74.2	0.39	89.4	10.3	59.1	5H
820310	JILQUERO S'*ANZA	42	HRS	64.0	73.3	0.39	88.5	10.0	57.5	3M
820311	JILQUERO S'*166R	6/43	HRS	66.4	70.8	0.40	85.7	10.6	59.3	5H
820312	JILQUERO S'*166R	6/44	HRS	66.0	71.4	0.39	86.6	10.8	59.6	6H
820313	JILQUERO S'*166R	6/46	HRS	64.8	70.5	0.40	85.1	11.1	60.8	4H
820314	JILQUERO S'*166R	6/48	HRS	64.4	69.5	0.41	83.5	11.1	61.9	6H

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 10% Protein.

4/ Observed Values Corrected to 10% Protein.

5/ Particularly Promising Overall Quality Characteristics.  
6/ Promising Overall Quality Characteristics.



NURSCO 9

DAVIS, CA

C.O. QUALSET

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR	RMKS
					3/			4/		
820282	(SON 64 X R50)166	1	HRS	64.5	64.0	4.4	990	959		2Q-FYELD
820283	APR BEARDED*166	2	HRS	63.4	62.3	4.2	1015	947		2
820284	BOB S'*ANZA	5	HRS	61.9	61.5	2.5	1005	980		2
820285	BOB S'*ANZA	6	HRS	60.4	61.1	2.5	980	1023		2
820286	BOB S'*ANZA	7	HRS	62.0	61.9	2.6	1050	1044		2
820287	BOB S'*ANZA	8	HRS	60.2	60.8	2.3	920	957		4 P-MTIME&BCRGR
820288	NURI 70*ANZA	9	HRS	61.0	60.7	2.2	960	941		5 P-MTIME&BCRGR
820289	NURI 70*ANZA	10	HRS	61.9	60.3	3.1	930	831		5 P-LVOL&BCRGR
820290	AZTECA 67*ANZA	11	HRS	62.9	63.4	3.4	920	951		6 P-BCRGR
820291	(TOB 66*CNO)ANZA	12	HRS	60.7	60.4	4.8	990	971		3
820292	(INIA-CNO*CAL)ANZA	13	HRS	60.6	60.1	2.5	1008	977		2
820293	(INIA-CNO*CAL)ANZA	14	HRS	60.9	60.9	2.9	940	940		2
820294	(INIA-CNO*CAL)ANZA	15	HRS	60.4	60.7	2.5	955	974		2
820295	(INIA-CNO*CAL)ANZA	16	HRS	60.4	59.8	2.5	985	948		2
820296	(INIA-CNO*CAL)ANZA	17	HRS	60.5	60.3	2.7	950	938		3 Q-LVOL&BCRGR
820297	ANZA (C1015284)	18	HRS	58.6	59.6	2.3	850	912		7 P-MTIME&BCRGR
820298	YECORA ROJO	19	HRS	66.5	65.7	8.0	1120	1070		1
820299	(INIA-CNO*CAL)ANZA	22	HRS	58.9	59.6	3.1	870	913		8 P-LVOL&BCRGR
820300	(INIA-CNO*CAL)ANZA	23	HRS	62.6	62.5	3.1	895	889		8 P-LVOL&BCRGR
820301	(CNO X 166)ANZA	24	HRS	68.4	68.1	6.5	1035	1016		3 P-FYELD
820302	(CON S-12)ANZA	26	HRS	59.4	59.5	2.5	950	956		2
820303	(CON S-12)ANZA	27	HRS	59.7	59.7	2.4	985	985		2
820304	(CON S-12)ANZA	28	HRS	59.7	59.3	2.6	1015	990		2
820305	(ZAGREB 673/2 X 166)166R	30	SRS	57.7	56.5	4.3	1025	953		1
820306	ANZA*SARIC 70	32	HRS	60.7	59.9	3.8	985	935		2
820307	ANZA*CAJENE	35	HRS	57.2	56.4	2.3	973	923		3 Q-MTIME&BCRGR
820308	(C113232*R50)ANZA	36	HRS	61.2	60.9	3.6	970	951		4 Q-BCRGR
820309	KLEIN SENDERO*ANZA	41	HRS	64.6	64.3	4.3	988	969		4 Q-BCRGR&EXC. MIL
820310	JILGUERO S'*ANZA	42	HRS	59.7	59.7	3.0	1015	1015		4 Q-BCRGR&EXC. MIL
820311	JILGUERO S'*166R	43	HRS	63.6	63.0	5.6	990	953		2
820312	JILGUERO S'*166R	44	HRS	64.1	63.3	6.2	1015	965		2
820313	JILGUERO S'*166R	46	HRS	64.1	63.0	2.8	1100	1032		2
820314	JILGUERO S'*166R	48	HRS	66.2	65.1	8.0	1065	997		2

COMMENTS: Several of the experimental crosses (footnoted) in this nursery have potential for improving the quality of California hard red wheat, with overall quality significantly better than Anza and equal to or better than Yecora Rojo. See Remarks column for deficiencies of the other selections.

P = Poor Q = Questionable





NURSCO 10

DAVIS, CA

C.O. QUALSET

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE
						1/		1/	3/	
820315	STURDY*ANZA	6/2	HRS	63.6	70.8	0.42	84.5	11.0	58.8	4M
820316	SON64-R1.REND*ANZA	6/3	HRS	63.6	72.9	0.42	86.7	9.4	58.3	6M
820317	SON64-R1.REND*ANZA	5/4	HRS	64.0	72.1	0.39	87.1	9.8	57.8	3M
820318	ANZA*JUSTIN	5/5	HRS	65.2	72.2	0.39	87.6	10.0	56.6	7M
820319	JUSTIN*ANZA	7	HRS	60.8	70.7	0.45	82.7	11.5	57.2	2H
820320	ANZA*SCOUT66	6/11	HRS	62.8	70.1	0.40	84.6	10.0	60.0	4M
820321	ANZA*SCOUT66	5/12	HRS	64.8	71.7	0.39	87.0	9.2	56.8	6M
820322	ANZA*SCOUT66	5/13	HRS	63.6	71.9	0.34	90.0	10.5	60.6	4H
820323	THATCHER*ANZA	5/14	HRS	63.2	71.6	0.35	89.0	8.9	59.8	4H
820324	(DIBO*MFENFLO)*ANZA	5/16	HRS	64.4	71.4	0.39	86.3	10.2	58.5	6M
820325	MAGNIF27*ANZA	5/17	HRS	64.0	71.9	0.39	87.3	10.1	63.4	7H
820326	(JUSTIN*SC66 2)ANZA	5/18	HRS	64.4	72.1	0.36	88.7	10.0	61.6	2H
820327	ANZA (C1015284)	20	HRS	63.2	70.7	0.42	84.5	9.4	59.4	2H
820328	YECORA ROJO	21	HRS	63.6	69.2	0.39	84.4	10.3	58.7	3H
820329	INIA 66R	22	HRS	64.0	69.3	0.43	82.5	10.2	60.1	8H
820330	YOLO	23	HRS	64.0	71.6	0.37	87.8	11.2	60.1	5H
820331	(JUSTIN*SC 2)TANOR171	26	HRS	63.2	70.3	0.37	86.4	10.0	59.0	3M
820332	(JUSTIN*SC66 2)TANOR1	6/27	HRS	62.4	72.2	0.41	86.1	10.1	58.6	3M
820333	(JUSTIN X SC66 2)ANZA	31	HRS	62.0	70.8	0.43	84.1	9.7	59.1	3M
820334	(JUSTIN X SC66 2)TANOR171	32	HRS	64.8	71.8	0.41	85.7	9.5	58.7	4H
820335	(JUSTIN X SC66 2)TANOR171	6/33	HRS	63.6	70.7	0.36	87.6	10.8	59.7	5H
820336	(JUSTIN X SC66 2)*ANZA	34	HRS	64.0	71.0	0.43	84.1	9.4	59.2	3H
820337	((SEL14*BURT 2-2-16)166)ANZA	5/35	HRS	62.4	71.6	0.44	84.3	10.2	58.8	3H
820338	((SEL14*BURT 2-2-16)166)ANZA	36	HRS	64.0	67.7	0.41	81.6	10.0	58.8	3H
820339	((SEL14*BURT 2-2-16)166)ANZA	6/37	HRS	63.2	71.6	0.40	86.3	10.6	58.1	3H
820340	((SEL14*BURT 2-2-16)166)TANOR171	6/38	HRS	62.4	70.0	0.41	84.1	11.0	60.1	3H
820341	((SEL14*BURT 2-2-16)166)TANOR171	6/39	HRS	62.0	69.8	0.42	83.3	9.7	58.8	4M
820342	((SEL14*BURT 2-2-16)166)ANZA	40	HRS	64.4	66.9	0.42	80.1	9.5	59.2	4M
820343	((SEL14*BURT 2-2-16)166)ANZA	5/41	HRS	64.8	72.8	0.39	88.1	9.7	58.6	4M
820344	((SEL14*BURT 2-2-16)166)ANZA	6/42	HRS	64.0	71.9	0.39	87.1	10.0	58.2	2H
820345	(HOPPS-RON X KAL)INIA66R	43	HRS	64.4	70.2	0.39	85.4	9.7	58.3	8M
820346	ANZA*(D63 X NAI60)	45	HWS	64.0	73.2	0.38	88.9	8.4	54.7	2L
820347	GAINES 2*166	46	HWS	62.4	68.3	0.45	80.1	9.7	59.3	6H
820348	GAINES 2*166	47	HWS	61.6	68.0	0.47	78.7	10.1	60.9	6H

1/ Observed Values Corrected to 14% Moisture Basis. 5/ Particularly Promising Overall Quality Characteristics.  
3/ Absorption at 14% Moisture Corrected to 10% Protein. 6/ Promising Overall Quality Characteristics.  
4/ Observed Values Corrected to 10% Protein.



NURSCO 10

DAVIS, CA

C.O. QUALSET

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR	RMKS
					3/			4/		
820315	STURDY*ANZA	2	HRS	62.4	61.4	3.5	1020	958	2	
820316	SON64-R1.REND*ANZA	3	HRS	62.3	62.9	3.9	950	987	3	
820317	SON64-R1.REND*ANZA	4	HRS	60.2	60.4	2.4	990	1002	2	
820318	ANZA*JUSTIN	5	HRS	62.2	62.2	4.2	930	930	2	Q-LVOL&MTIME
820319	JUSTIN*ANZA	7	HRS	61.3	59.8	1.9	990	897	2	
820320	ANZA*SCOUT66	11	HRS	62.6	62.6	3.0	1050	1050	2	Q-BCRGR
820321	ANZA*SCOUT66	12	HRS	59.6	60.4	3.4	925	975	5	OUTSTANDING BAKING
820322	ANZA*SCOUT66	13	HRS	63.7	63.2	3.6	1075	1044	2	OUTSTANDING BAKING
820323	THATCHER*ANZA	14	HRS	60.3	61.4	3.4	1000	1068	2	OUTSTANDING BAKING
820324	(DIBO*MFENFLO)*ANZA	16	HRS	61.3	61.1	3.0	1015	1003	1	
820325	MAGNIF27*ANZA	17	HRS	66.1	66.0	8.2	1020	1014	2	VS-MIXING TYPE
820326	(JUSTIN*SC66 2)ANZA	18	HRS	63.2	63.2	2.4	990	990	2	
820327	ANZA (C1015284)	20	HRS	61.4	62.0	2.1	965	1002	7	YOLO?
820328	YECORA ROJO	21	HRS	61.1	60.8	2.8	1005	986	5	
820329	INIA 66R	22	HRS	63.4	63.2	7.8	1015	1003	2	
820330	YOLO	23	HRS	63.9	62.7	4.5	1075	1001	1	YECORA ROJO?
820331	(JUSTIN*SC 2)TANOR171	26	HRS	61.6	61.6	2.6	990	990	4	Q-BCRGR
820332	(JUSTIN*SC66 2)TANOR1	27	HRS	60.3	60.2	2.0	1025	1019	3	
820333	(JUSTIN X SC66 2)ANZA	31	HRS	62.4	62.7	2.5	940	959	4	Q-BCRGR
820334	(JUSTIN X SC66 2)TANOR171	32	HRS	61.8	62.3	3.5	940	971	4	Q-BCRGR
820335	(JUSTIN X SC66 2)TANOR171	33	HRS	63.1	62.3	5.1	1000	950	2	Q-LVOL&BCRGR
820336	(JUSTIN X SC66 2)*ANZA	34	HRS	62.2	62.8	2.8	890	927	6	
820337	((SEL14*BURT 2-2-16)166)ANZA	35	HRS	61.6	61.4	2.8	1090	1078	1	
820338	((SEL14*BURT 2-2-16)166)ANZA	36	HRS	63.4	63.4	3.8	990	990	2	P-FYELD
820339	((SEL14*BURT 2-2-16)166)ANZA	37	HRS	61.8	61.2	3.2	965	928	1	
820340	((SEL14*BURT 2-2-16)166)TANOR171	38	HRS	63.7	62.7	3.6	1035	973	2	Q-FYELD
820341	((SEL14*BURT 2-2-16)166)TANOR171	39	HRS	61.1	61.4	3.4	990	1009	2	POOR FYELD
820342	((SEL14*BURT 2-2-16)166)ANZA	40	HRS	62.3	62.8	3.2	953	984	2	
820343	((SEL14*BURT 2-2-16)166)ANZA	41	HRS	59.4	59.7	3.0	988	1007	2	
820344	((SEL14*BURT 2-2-16)166)ANZA	42	HRS	59.8	59.8	2.3	975	975	2	Q-MTIME
820345	(HOPPS-RON X KAL)INIA66R	43	HRS	65.6	65.9	6.7	890	909	3	Q-LVOL&BCRGR
820346	ANZA*(D63 X NA160)	45	HWS	52.7	54.3	1.0	730	829	8	VP Baking
820347	GAINES 2*166	46	HWS	62.6	62.9	6.0	950	969	3	Q-FYELD
820348	GAINES 2*166	47	HWS	63.6	63.5	7.2	955	949	3	Q-FYELD

COMMENTS: Several of these selections (Footnoted) have good overall quality equal to or better than Yecora Rojo and Inia 66R. It is our opinion that a sample mix up has taken place in regard to Yolo and Yecora Rojo, as neither are typical in dough mixing time and loaf characteristics. #21 looks like Yolo, #22 is more typical of Yecora Rojo, and #23 appears typical of Inia 66R.

Q = Questionable, VS = Very Strong, P = Poor



NURSCO 11

DAVIS, CA

C.O. QUALSET

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE
						1/		1/	3/	
820349	(JUSTIN*SC66)ANZA	6/1	HWW	63.2	70.2	0.39	85.2	9.1	58.1	6M
820350	(DIBO X MENFLO)	6/2	HWW	63.6	68.7	0.40	83.3	8.3	57.9	5M
820351	WW31 4*TRANSEC	6/5	HWW	63.6	67.8	0.41	81.7	10.4	57.1	4M
820352	M1843	6/9	HWW	64.4	69.1	0.39	83.9	9.0	57.9	4M
820353	QT4062	6/12	HWW	64.4	71.8	0.40	86.4	10.0	58.1	6M
820354	ANZA (C1015284)	13	HRW	64.4	69.4	0.37	85.3	9.2	58.7	5M
820355	YECORA ROJO	14	HRW	63.2	66.0	0.42	79.4	9.9	58.3	8H
820356	INIA 66R	15	HRW	65.6	67.8	0.36	84.2	10.4	60.6	5H
820357	(INIA-CIANO*CALIDAD)ANZA	6/17	HRW	64.4	67.7	0.36	84.1	9.9	57.8	4M
820358	ANZA*TOB66	6/18	HRW	64.8	68.7	0.37	84.7	9.1	58.2	8M
820359	ANZA*JUSTIN	5/19	HRW	64.0	72.2	0.36	89.0	11.6	60.9	4H
820360	BOB'S*ANZA	6/21	HRW	61.6	67.4	0.41	81.4	10.7	58.9	4H
820361	BOB S'*ANZA	22	HRW	64.4	70.3	0.39	85.5	10.1	58.9	4H
820362	(166*BOB'S)*ANZA	23	HRW	64.0	68.9	0.38	84.4	8.9	57.8	4M
820363	INIA*ANZA	6/24	HRW	64.0	70.2	0.42	83.9	9.9	59.4	3H
820364	YECORA70*ANZA	25	HRW	61.2	69.3	0.41	83.4	9.4	57.4	8M
820365	D6850*BEZOSTAYA	26	HRW	61.6	68.2	0.40	82.8	10.3	57.5	8M
820366	(ANZA X GAINES)CALIDAD	5/27	HWW	62.0	69.3	0.40	83.7	10.0	58.6	5H
820367	166R 2*JUSTIN	29	HRW	62.8	69.9	0.38	85.3	10.6	58.0	8M
820368	ANZA*JUSTIN	6/30	HRW	62.4	69.8	0.39	85.0	10.4	58.7	4M
820369	ANZA*JUSTIN	31	HRW	63.6	69.2	0.39	84.4	9.5	56.2	4M
820370	YR'S'(R)*MEXIFAN	6/32	HRW	62.8	68.9	0.40	83.3	9.9	57.3	8H
820371	BEZOSTAYA*166	33	HWW	63.2	70.0	0.44	82.4	9.2	58.9	8M
820372	OPAL*166	34	HWW	63.6	67.3	0.44	79.9	9.2	59.3	8H
820373	(ZAGREB673/2*166R)166R	5/35	HRW	60.8	70.2	0.37	86.2	10.9	58.4	4H
820374	(TOB X R50)166	6/36	HRW	63.6	69.5	0.46	80.8	10.2	60.8	5H
820375	BB S'*ANZA	5/37	HRW	62.8	71.2	0.39	86.4	9.8	56.2	3M
820376	ANZA 2*JUSTIN	5/38	HRW	63.6	71.7	0.38	87.6	10.1	59.1	4M
820377	PITIC62/1153-526/2/SON	6/40	HRW	61.6	67.6	0.40	82.2	10.9	57.4	7H
820378	FLAMEKS*SARIC70	6/41	HRW	61.2	67.6	0.42	80.8	10.7	60.6	8H
820379	FLAMEKS*SARIC70	6/42	HRW	63.2	68.8	0.40	83.2	9.4	58.4	7H
820380	HOOPVOL*CI297001	6/43	HRW	62.0	68.8	0.41	83.0	10.1	59.9	6H
820381	(FN-K58N(FR X KAD-GB)2)*(BB-CHA)	44	HWW	64.4	67.2	0.46	78.7	9.7	60.5	6M
820382	BOB WHITE'S	45	HRW	63.2	67.3	0.41	81.3	9.7	57.8	8M
820383	BON-YN 70/T.AEST*KAL-BB	46	HWW	60.0	66.0	0.41	80.0	9.8	55.9	8M

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 10% Protein.

4/ Observed Values Corrected to 10% Protein.

5/ Particularly Promising Overall Quality Characteristics.

6/ Promising Overall Quality Characteristics.





NURSCO 11

DAVIS, CA

C.O. QUALSET

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR	RMKS
					3/			4/		
820349	(JUSTIN*SC66)ANZA	1	HRW	63.3	64.2	4.3	923	979	3	6P-FYELD&BCRGR
820350	(DIBO X MENFLO)	2	HRW	60.3	62.0	3.3	800	905	2	2Q-FYELD
820351	WW31 4*TRANSEC	5	HRW	61.1	60.7	3.4	965	940	2	2Q-FYELD
820352	MT843	9	HRW	59.5	60.5	2.7	895	957	2	2Q-FYELD
820353	QT4062	12	HRW	62.2	62.2	3.4	1005	1005	3	
820354	ANZA (CI015284)	13	HRW	61.0	61.8	2.4	925	975	5	
820355	YECORA ROJO	14	HRW	64.3	64.4	9.5	975	981	2	
820356	INIA 66R	15	HRW	65.1	64.7	5.5	1000	975	2	
820357	(INIA-CIANO*CALIDAD)ANZA	17	HRW	60.3	60.4	2.6	1025	1031	2	
820358	ANZA*TOB66	18	HRW	62.9	63.8	5.4	878	934	3	
820359	ANZA*JUSTIN	19	HRW	65.1	63.5	3.3	1040	941	2	
820360	BOB S' *ANZA	21	HRW	63.8	63.1	2.7	1053	1010	3	3Q-FYELD
820361	BOB S' *ANZA	22	HRW	64.1	64.0	3.6	993	987	4	4Q-BCRGR
820362	(166*BOB S' ) *ANZA	23	HRW	60.3	61.4	2.4	865	933	6	6Q-BCRGR
820363	INIA*ANZA	24	HRW	62.4	62.5	2.1	950	956	3	
820364	YECORA70*ANZA	25	HRW	61.9	62.5	5.3	895	932	5	5Q-BCRGR
820365	D6850*BEZOSTAYA	26	HRW	61.4	61.1	5.1	890	871	4	4Q-BCRGR
820366	(ANZA X GAINES)CALIDAD	27	HRW	62.2	62.2	4.9	950	950	4	4Q-BCRGR
820367	166R 2*JUSTIN	29	HRW	63.2	62.6	6.1	995	958	2	
820368	ANZA*JUSTIN	30	HRW	65.2	64.8	2.3	968	943	3	
820369	ANZA*JUSTIN	31	HRW	62.3	62.8	2.9	933	964	4	4Q-BCRGR
820370	YR S' (R)*MEXIFAN	32	HRW	60.8	60.9	9.1	955	961	2	
820371	BEZOSTAYA*166	33	HRW	64.2	65.0	5.1	863	913	4	4Q-BCRGR
820372	OPAL*166	34	HRW	63.1	63.9	9.1	890	940	3	3Q-FYELD
820373	(ZAGREB673/2*166R)166R	35	HRW	59.9	59.0	2.9	1048	992	2	
820374	(TOB X R50)166	36	HRW	65.6	65.4	5.3	953	941	2	
820375	BB S' *ANZA	37	HRW	57.1	57.3	2.3	1015	1027	2	2Q-MTIME
820376	ANZA 2*JUSTIN	38	HRW	59.8	59.7	2.2	1015	1009	2	2Q-MTIME
820377	PITIG62/1153-526/2/SON	40	HRW	62.9	62.0	7.2	975	919	2	
820378	FLAMEKS*SARIC70	41	HRW	63.9	63.2	7.4	1040	997	1	
820379	FLAMEKS*SARIC70	42	HRW	61.4	62.0	6.8	955	992	2	
820380	HOOPYVOL*CI297001	43	HRW	64.6	64.5	6.5	1000	994	2	
820381	(FN-K58N(FR X KAD-GB)2)*(BB-CHA)	44	HRW	64.3	64.6	3.9	905	924	4	4Q-FYELD&BCRGR
820382	BOB WHITE S'	45	HRW	64.1	64.4	4.8	900	919	4	4Q-FYELD&BCRGR
820383	BON-YN 70/T.AEST*KAL-BB	46	HRW	60.8	61.0	4.9	825	837	6	6Q-FYELD&BCRGR



USDA, SEA AR  
WESTERN WHEAT QUALITY LAB.  
PULLMAN, WA.

CALIFORNIA EXP.214

PAGE 2

NURSCO 11

DAVIS, CA

C.O. QUALSET

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE
						<u>1/</u>		<u>1/</u>	<u>3/</u>	
820384	KUM-TRM73*PTM70-ANA75	47	HWW	64.4	68.2	0.40	82.7	9.8	54.9	8M
820385	YR70-AZ67*TUC	48	HWW	61.2	66.8	0.40	81.2	10.2	60.4	5H





USDA, SEA AR  
WESTERN WHEAT QUALITY LAB.  
PULLMAN, WA.  
NURSCO 11

CALIFORNIA EXP.214

DAVIS, CA

C.O. QUALSET

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR	RMKS
					3/			4/		
820384	KUM-TRM73*PTM70-ANA75	47	HW	59.3	59.5	4.5	820	832		6 P-LVOL&BCRGR
820385	YR70-AZ67*TUC	48	HW	64.2	64.0	4.0	990	978		2 P-FYELD

COMMENTS: Several of the selections in this experimental nursery are equal to or better than Yecora Rojo and Inia 66R in overall end-use quality and offer some promise as candidates for commercial varieties.



NURSCO 12

C.R. ROHDE

PENDLETON, OR

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/
820386	HYSLOP	C1014564	SWW	57.8	69.4	0.47	75.5	10.8	55.5
820387	STEPHENS	C1017596	SWW	57.5	70.6	0.45	78.0	10.5	52.9
820388	CREW	C1017951	SWW	56.7	70.2	0.46	78.2	10.3	50.3
820389	DAWS	C1017419	SWW	57.0	69.4	0.48	74.4	10.4	53.4
820390	NAUAINES	C1013968	SWW	59.0	69.6	0.45	77.1	10.0	55.8
820391	LEWJAIN	C1017909	SWW	57.6	70.3	0.43	78.8	9.7	55.9
820392	MCDERMID	C1014565	SWW	58.4	71.5	0.46	79.7	10.3	55.6
820393	HYSLOP/OR6739, SEL. 744	6/ OR774	SWW	57.6	70.7	0.46	78.8	10.7	55.7
820394	C114482/MORO, SEL. E109	OR797	SWW	59.2	68.5	0.44	76.6	9.5	54.3
820395	63-112-66-4/YAY//63-112-66, ETC.	OR801	SWW	56.4	66.6	0.47	71.4	11.4	57.6
820396	DAWS*2/SEL. M72-330. A-234	OR804	SWW	55.1	67.4	0.46	74.0	10.7	57.6
820397	SUWON92/3*OMAR//MORO, SEL. 142	6/ OR7142	SWW	56.8	69.4	0.44	78.3	10.5	53.7
820398	CLARIFEN/WA5836, SEL. 27-26	OR7925	HRW	57.6	68.2	0.39	80.0	9.9	58.6
820399	DRC/68-23. OWM68109-1M6. R-241	6/ OR7956	SWW	63.9	68.7	0.45	76.2	10.8	56.1
820400	SPRAGUE/WA5836. W-4000	6/ OR7965	SWW	67.9	68.5	0.46	75.3	10.9	57.2
820401	HYS/YAY/WA4995/3/CERCO. W-1980	6/ OR7996	SWW	67.3	68.4	0.44	75.6	10.1	56.0
820402	HYS/NOR//CAMA/3/SM-4 ETC.	6/ OR8188	SWW	58.1	69.2	0.46	76.6	11.0	56.2
820403	CD/SEL. 101//55-1744/3/DC	6/ OR67237	SWW	57.6	69.2	0.47	76.2	10.1	55.7
820404	YAMHILL/HYSLOP	6/ OR68007	SWW	59.1	72.3	0.44	82.9	11.1	55.9
820405	A586	6/ OWM. 51	SWW	56.8	68.4	0.47	74.3	10.7	56.9
820406	A612	OWM. 318	SWW	53.9	69.3	0.48	75.4	11.5	55.9
820407	A613	6/ OWM. 319	SWW	57.2	67.6	0.43	75.1	10.7	53.7
820408	A616	6/ OWMF. 332	SWW	54.0	71.8	0.43	80.1	10.8	54.6
820409		6/ FW75536F70	SWW	58.6	69.8	0.41	80.5	10.9	56.4
820410	RB/1523-DC	FW73830CP0	SWW	54.0	65.6	0.41	71.9	11.1	54.7

1/ Observed Values Corrected to 14% Moisture Basis. 5/ Particularly Promising Overall Quality Characteristics.

3/ Absorption at 14% Moisture Corrected to 11% Protein. 6/ Promising Overall Quality Characteristics.

4/ Observed Values Corrected to 11% Protein.

COMMENTS: The wheats in this nursery were not typical in both milling and baking characteristics. Test weights were low, protein was high and in retrospect we should not have evaluated the wheats as the reliability of the data is certainly questionable. Judgements made were on a comparable basis with the check varieties, but should be used cautiously.



NURSCO 12

PENDLETON, OR

C.R. ROHDE

LABNUM	VARIETY	IDNO	CLASS	MTYPE	CODI	CODIC	CAVOL	SCSOR	RMKS
						4/			
820386	HYSLOP	C1014564	SWW	4M	8.52	8.50	1195	66.0	
820387	STEPHENS	C1017596	SWW	3M	8.59	8.53	1280	72.0	
820388	CREW	C1017951	SWW	2M	8.79	8.71	1280	74.0	
820389	DAWS	C1017419	SWW	4M	8.35	8.28	1225	67.0	
820390	NUGAINES	C1013968	SWW	4M	8.74	8.62	1210	66.0	
820391	LEWJAIN	C1017909	SWW	4M	8.91	8.77	1275	69.0	
820392	MCDERMID	C1014565	SWW	3M	8.51	8.44	1205	67.0	
820393	HYSLOP/OR6739, SEL.744	OR774	SWW	2H	8.50	8.47	1240	69.0	
820394	C114482/MORO, SEL.E109	OR797	SWW	4M	8.60	8.43	1195	65.0	Q-FYELD&SCSOR
820395	63-112-66-4/YAY//63-112-66, ETC.	OR801	SWW	2H	8.41	8.46	1195	67.0	P-FYELD
820396	DAWS*2/SEL.M72-330.A-234	OR804	SWW	4M	8.49	8.45	1230	71.0	Q-FYELD
820397	SUWON92/3*OMAR//MORO, SEL.142	OR7142	SWW	3M	8.56	8.51	1260	73.0	
820398	CLARIFEN/WA5836, SEL.27-26	OR7925	HRW	7M	7.79	7.70	1125	65.0	HRW-POOR BAKING
820399	DRC/68-23.OWW68109-1M6.R-241	OR7956	SWW	3M	8.65	8.63	1230	72.0	
820400	SPRAGUE/WA5836.W-4000	OR7965	SWW	3M	8.47	8.46	1200	69.0	
820401	HYS/YAY/WA4995/3/CERCO.W-1980	OR7996	SWW	4M	8.42	8.33	1240	71.0	Q-CODI
820402	HYS/NOR//CAMA/3/SM-4 ETC.	OR8188	SWW	4M	8.31	8.31	1205	67.0	Q-CODI
820403	CD/SEL.101//55-1744/3/DC	OR67237	SWW	4M	8.71	8.61	1215	68.0	
820404	YAMHILL/HYSLOP	OR68007	SWW	2M	8.54	8.55	1250	67.0	
820405	A586	OWW.51	SWW	4M	8.52	8.49	1200	67.0	
820406	A612	OWW.318	SWW	2M	8.37	8.43	1125	60.0	P-CAVOL&SCSOR
820407	A613	OWW.319	SWW	2M	8.74	8.70	1240	68.0	
820408	A616	OWWF.332	SWW	3M	8.50	8.48	1260	69.0	
820409		FW75536F70	SWW	4M	8.55	8.54	1235	67.0	
820410	RB/1523-DC	FW73830CPO	SWW	2M	8.47	8.49	1250	65.0	P-FYELD&SCSOR





NURSCO 13

HEGLAR, ID

D. F. SUNDERMAN

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH <u>1/</u>	MSCOR	FPROT <u>1/</u>	MABSC <u>3/</u>	MTYPE
820411	MANNING	UT89099	HRW	62.2	69.7	0.39	86.8	10.9	62.4	8M
820412	JEFF	CI017270	HRW	63.5	71.0	0.41	88.1	11.8	62.4	8M
820413	HANSEL	CI017296	HRW	63.6	71.8	0.39	90.0	12.7	61.8	7H
820414	ARBON	CI017746	HRW	62.7	73.0	0.38	92.7	11.9	59.4	7M
820415	NEELEY	CI017860	HRW	63.6	69.1	0.39	86.0	11.9	62.6	8M
820416	JEFF/3/11-60-155/CI14106//MC	A7389W-	HRW	63.4	70.2	0.40	87.6	12.3	63.7	6H
820417	WRR//KO/PI178383/3/CI14106, ETC.	A7333W-	HRW	61.8	70.2	0.40	87.4	11.5	62.1	8M
820418	1160-156/CI14106//MC/6/ETC.	A7321W-	HRW	63.4	72.5	0.41	90.7	11.8	61.7	6M
820419	DM/PI173438//CLM/3/DM ETC.	<u>6/</u> A7224W-	HRW	63.9	69.4	0.41	86.4	11.8	61.2	8M
820420	11-60-155/2*CI14107//RGR	A70171W-	HRW	63.2	68.7	0.42	84.6	11.9	63.4	6H
820421	RGR/3/11-60-156/CI14107//IT	ID207	HRW	62.5	71.1	0.42	87.5	11.9	61.9	8M



NURSCO 13

HEGLAR, ID

D.F. SUNDERMAN

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR	RMKS
					<u>3/</u>			<u>4/</u>		
820411	MANNING	UT89099	HRW	67.0	68.1	7.0	900	968	3	3 low LVOL
820412	JEFF	C1017270	HRW	68.4	68.6	5.8	830	842	3	
820413	HANSEL	C1017296	HRW	67.7	67.0	8.3	965	922	2	
820414	ARBON	C1017746	HRW	64.5	64.6	4.7	825	831	4	low LVOL&BCRGR
820415	NEELEY	C1017860	HRW	68.0	68.1	7.5	820	826	4	low LVOL&BCRGR
820416	JEFF/3/11-60-155/C114106//MC	A7389W-	HRW	68.0	67.7	6.0	915	896	4	Q-BCRGR
820417	WRR//KO/PI178383/3/C114106, ETC.	A7333W-	HRW	65.8	66.3	7.5	870	901	4	Q-BCRGR
820418	1160-156/C114106//MC/6/ETC.	A7321W-	HRW	66.7	66.9	3.3	895	907	6	poor BCRGR
820419	DM/PI173438//CLM/3/DW ETC.	A7224W-	HRW	68.2	68.4	5.2	868	880	3	
820420	11-60-155/2*C114107//RGR	A70171W-	HRW	70.0	70.1	5.4	858	864	4	Q-FYELD&BCRGR
820421	RGR/3/11-60-156/C114107//1T	ID207	HRW	68.5	68.6	5.4	873	879	6	P-BCRGR

1/ Observed Values Corrected to 14% Moisture Basis      5/ Particularly Promising Overall Quality Characteristics.  
3/ Absorption at 14% Moisture Corrected to 12% Protein.      6/ Promising Overall Quality Characteristics.  
4/ Observed Values Corrected to 12% Protein.

COMMENTS: A77244W is the most promising selection in overall quality. The remaining selections were all questionable to poor in crumb structure and grain texture of the bread. While A7389W, A7333W and A7321W are about equal to Arbon and Neeley in crumb grain they were better in loaf volume. All have good dough absorption and mixing properties.

P = Poor, Q = Questionable



NURSCO 14

ABERDEEN, ID

D.F. SUNDERMAN

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE	BABS	BABSC
						<u>1/</u>		<u>1/</u>	<u>3/</u>			<u>3/</u>
820422	BORAH			60.0	73.9	0.35	91.1	12.5	62.3	2H	64.9	63.4
820423	SAWTELL/ID0084	C1017267	HRS	59.6	71.3	0.35	88.3	11.4	61.6	3H	64.6	64.2
820424	MC/BJ066/4/TZPP/SN64 ETC.	6/ID0257	HRS	60.0	74.8	0.39	90.0	12.1	60.7	5H	64.4	63.3
820425	SD2271/SD2167	5/ID0258	HRS	58.0	72.2	0.39	87.5	13.1	60.4	2H	65.1	63.0
820426	BB11/4/7*SF1/3/AS/FR ETC.	6/SD2860	SWS	56.8	69.7	0.37	86.4	9.6	55.4	4M	54.6	56.0
		5/ID0248										
820427	ID0118/OASIS/3/5*TWIN ETC.	6/ID0251	SWS	56.8	67.9	0.39	82.7	10.3	53.7	2M	52.6	53.3
820428	ID0118/OASIS/3/5*TWIN ETC.	ID0252	SWS	56.8	66.3	0.38	81.2	10.2	54.5	2M	51.6	52.4
820429	FIELDWIN	C1017425	SWS	59.6	67.8	0.35	85.1	9.8	53.5	2M	51.2	52.4

1/ Observed Values Corrected to 14% Moisture Basis.3/ Absorption at 14% Moisture Corrected to 11% Protein. 5/ Particularly Promising Overall Quality Characteristics.4/ Observed Values Corrected to 11% Protein. 6/ Promising Overall Quality Characteristics.

COMMENTS: Note the dual properties of ID258. The Japanese sponge cake volumes and scores of all the SWS selections were very good. ID252 however, has poor flour yield.





NURSCO 14

ABERDEEN, ID

D.F. SUNDERMAN

LABNUM	VARIETY	IDNO	CLASS	MTIME	LVOL	LVOLC	BCRGR	CODI	CODIC	CAVOL	SCSOR	RMKS
						4/			4/			
820422	BORAH	C1017267	HRS	2.0	1100	1007	2	8.45	8.57			
820423	SAWTELL/ID0084	ID0257	HRS	3.2	1040	1015	2	8.52	8.56			
820424	MC/BJ066/4/TZPP/SN64 ETC.	ID0258	HRS	3.8	1030	962	1	8.94	9.03			
820425	SD2271/SD2167	SD2860	HRS	2.1	1065	935	2	8.22	8.39			
820426	BB11/4/7*SF1/3/AS/FR ETC.	ID0248	SWS	1.6	890	974	7	9.39	9.23	1445		Possible dual Slightly low LVOL 83.0
820427	ID0118/OASIS/3/5*TWIN ETC.	ID0251	SWS	1.0	855	897	9	9.34	9.26	1455		Q-MILLING
820428	ID0118/OASIS/3/5*TWIN ETC.	ID0252	SWS	1.0	795	843	8	9.41	9.32	1435		P-FYELD
820429	FIELDWIN	C1017425	SWS	1.0	760	832	8	9.34	9.21	1375		78.0



USDA, SEA AR  
WESTERN WHEAT QUALITY LAB.  
PULLMAN, WA.

NURSCO 15

PNW CROP QUALITY SURVEY

OR, WA, ID

SEE NURSCO 07 FOR DATA RESULTS.



NURSCO 16

BZ, HV, MC, SD, CN MONT.

MCNEAL &amp; TAYLOR

LABNUM	VARIETY	IDNO	CLASS	FASH 1/	FPROT 1/	FABS	FPEAK	FSTAB	MABSC 3/	MTYPE
820441	HAVRE SPRING	5/ 101	HRS	0.38	12.9	56.8	6.7	14.1	65.4	5H
820442		5/ 102	HRS	0.43	12.9	59.3	12.6	21.9	66.5	5H
820443		103	HRS	0.45	13.5	57.7	9.5	37.3	65.2	8H
820444		5/ 104	HRS	0.41	13.7	64.5	14.2	16.7	64.1	6H
820445	FORTUNA (C1013596)--HAVRE SPRING	105	HRS	0.43	13.8	65.2	98.0	10.8	63.9	3H
820446	MOCCASIN SPRING	5/ 106	HRS	0.38	14.5	62.5	15.6	15.5	63.8	5H
820447		107	HRS	0.44	14.3	65.1	19.5	34.2	68.0	6H
820448		5/ 109	HRS	0.43	14.7	66.7	19.0	31.7	64.8	6H
820449	FORTUNA (C1013596)--MOCCASIN SPRING	110	HRS	0.42	14.3	63.7	8.4	17.3	62.6	3H
820450	SIDNEY SPRING	5/ 111	HRS	0.44	14.8	61.5	10.4	26.0	63.5	5H
820451		112	HRS	0.48	15.6	65.4	22.0	35.6	66.5	8H
820452		5/ 113	HRS	0.48	15.2	60.7	13.5	54.0	65.5	8H
820453		5/ 114	HRS	0.47	15.6	66.0	22.1	31.9	66.6	7H
820454	FORTUNA (C1013596)--SIDNEY SPRING	115	HRS	0.45	15.1	65.6	10.7	26.0	62.5	3H
820455	CONRAD SPRING	5/ 116	HRS	0.40	11.9	60.6	4.6	3.2	64.0	2H
820456		5/ 117	HRS	0.42	11.8	68.3	7.1	8.9	64.2	3H
820457		118	HRS	0.42	12.3	61.2	2.9	18.4	67.2	6H
820458		5/ 119	HRS	0.40	13.1	67.7	7.9	8.8	64.9	3H
820459	FORTUNA (C1013596)--CONRAD SPRING	120	HRS	0.44	14.2	67.6	5.7	4.7	63.3	2H
820460	WINALTA (C1013670)--BOZEMAN WINTER	201	HRW	0.40	13.0	65.1	6.0	6.6	64.7	3H
820461	BOZEMAN WINTER	5/ 202	HRW	0.41	12.9	64.2	6.7	6.9	64.4	4H
820462		5/ 203	HRW	0.43	12.3	64.8	7.8	7.9	64.5	4H
820463		5/ 204	HRW	0.43	12.2	64.7	5.4	4.4	64.0	2H
820464		5/ 205	HRW	0.37	11.9	61.4	6.1	9.2	63.0	3H
820465	WINALTA (C1013670)--MOCCASIN WINTER	207	HRW	0.36	13.7	61.4	3.8	13.1	63.1	6H
820466	MOCCASIN WINTER	5/ 208	HRW	0.40	14.4	62.3	10.0	22.5	64.4	5H
820467		5/ 209	HRW	0.40	14.3	63.0	14.3	25.8	65.4	6H
820468		210	HRW	0.41	14.0	64.5	12.3	18.5	62.1	5H
820469		5/ 211	HRW	0.39	13.2	61.4	3.2	10.8	62.7	6H
820470	WINALTA (C1013670)--HAVRE WINTER	219	HRW	0.38	12.7	61.1	9.0	19.3	63.3	5H
820471	HAVRE WINTER	5/ 220	HRW	0.40	12.5	61.1	7.4	12.5	62.8	5H
820472		5/ 221	HRW	0.40	12.3	62.4	7.5	20.8	64.9	5H
820473		222	HRW	0.40	12.7	62.6	11.4	16.2	63.3	5H
820474		5/ 223	HRW	0.34	12.0	61.1	7.7	9.5	61.5	5H

1/ Observed Values Corrected to 14% Moisture Basis.

5/ Particularly Promising Overall Quality Characteristics.

3/ Absorption at 14% Moisture Corrected to 13% Protein.

6/ Promising Overall Quality Characteristics.

4/ Observed Values Corrected to 13% Protein.





LABNUM	VARIETY	IDNO	CLASS	BABSC 3/	MTIME	LVOL	LVOLC 4/	BCRGR	RMKS
820441	HAVRE SPRING	101	HRS	67.6	4.9	1225	1231	2	
820442		102	HRS	68.7	5.0	1175	1181	2	Too long mixing
820443		103	HRS	68.4	12.0	1235	1204	2	
820444		104	HRS	66.3	5.6	1185	1142	2	
820445	FORTUNA (CI013596)--HAVRE SPRING	105	HRS	66.1	3.5	1170	1120	2	
820446	MOCCASIN SPRING	106	HRS	66.0	4.9	1270	1177	2	
820447		107	HRS	70.2	7.2	1160	1079	2	Long mixing
820448		109	HRS	67.0	5.6	1180	1075	2	
820449	FORTUNA (CI013596)--MOCCASIN SPRING	110	HRS	64.8	3.8	1185	1104	2	
820450	SIDNEY SPRING	111	HRS	65.7	6.0	1325	1213	2	
820451		112	HRS	69.2	7.7	1190	1029	2	Too long mixing
820452		113	HRS	68.7	13.8	1250	1114	2	
820453		114	HRS	68.8	6.7	1275	1114	1	
820454	FORTUNA (CI013596)--SIDNEY SPRING	115	HRS	64.7	4.0	1250	1120	2	
820455	CONRAD SPRING	116	HRS	66.2	3.3	1045	1113	2	
820456		117	HRS	68.9	3.8	1005	1079	2	Long mixing
820457		118	HRS	68.4	7.1	1090	1133	2	
820458		119	HRS	67.1	3.7	1110	1104	2	
820459	FORTUNA (CI013596)--CONRAD SPRING	120	HRS	65.5	2.6	1080	1006	2	
820460	WINALTA (CI013670)--BOZEMAN WINTER	201	HRW	66.9	3.3	1100	1100	2	
820461	BOZEMAN WINTER	202	HRW	66.6	3.6	1070	1076	2	
820462		203	HRW	66.7	3.9	1035	1078	2	
820463		204	HRW	66.2	2.8	1030	1080	2	
820464		205	HRW	65.2	3.4	1075	1143	2	
820465	WINALTA (CI013670)--MOCCASIN WINTER	207	HRW	65.3	5.6	1055	1012	2	
820466	MOCCASIN WINTER	208	HRW	67.1	5.8	1160	1073	2	Questionable loaf vol.
820467		209	HRW	68.1	6.1	1085	1004	2	
820468		210	HRW	65.3	4.3	1030	968	2	
820469		211	HRW	64.9	6.1	1025	1013	2	
820470	WINALTA (CI013670)--HAVRE WINTER	219	HRW	65.5	4.2	1075	1094	2	
820471	HAVRE WINTER	220	HRW	65.0	5.3	1050	1081	2	Questionable loaf vol.
820472		221	HRW	67.1	5.4	1010	1053	2	
820473		222	HRW	66.0	4.8	1000	1019	2	
820474		223	HRW	63.7	4.6	1025	1087	2	

## COMMENTS:

These flour samples were evaluated in co-operation with the Montana Wheat Quality Council. They are experimental HRS and HRW wheats from the Montana wheat breeding program Montana State University, Bozeman, MT. See remarks column for comments. Each is compared to the check variety (Fortuna or Winalta) at each location.



NURSCO 17

CUN, RLSP, PUL, HAR, LND

C.F. KONZAK

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE	CODI	CODIC	RMKS
						<u>1/</u>		<u>1/</u>	<u>3/</u>			<u>4/</u>	
820475	FIELDER (CUNNINGHAM IRRIGATED)	C1017268	SWS	63.3	71.5	0.40	86.4	9.0	51.5	1M	9.34	9.23	
820476	URQUIE	C1017413	SWS	62.3	72.7	0.40	88.2	8.5	53.3	2M	9.34	9.18	
820479		<u>6/</u> WA6831	SWS	62.1	71.4	0.39	87.0	8.2	52.4	1M	9.56	9.36	
820480	FIELDER (ROYAL SLOPE IRRIGATED)	C1017268	SWS	63.6	70.7	0.38	86.8	9.8	52.1	2M	9.64	9.62	
820481	URQUIE	C1017413	SWS	63.2	71.9	0.40	87.4	9.8	53.2	2M	9.37	9.35	
820484		<u>6/</u> WA6831	SWS	61.6	70.3	0.39	86.1	9.9	52.7	2M	9.32	9.31	
820485	FIELDER (PULLMAN)	C1017268	SWS	61.9	69.2	0.35	87.2	10.4	52.5	2M	9.36	9.41	
820486	URQUIE	C1017413	SWS	63.4	71.1	0.31	91.7	10.7	53.7	2M	8.90	8.98	
820489		<u>6/</u> WA6831	SWS	61.3	69.8	0.31	90.3	10.2	54.3	2M	9.09	9.11	
820490	FIELDER (HARRINGTON)	C1017268	SWS	62.3	70.4	0.39	86.0	9.8	51.3	1M	9.09	9.07	
820491	URQUIE	C1017413	SWS	62.4	71.8	0.40	86.8	10.6	53.4	2M	9.32	9.39	
820494		<u>6/</u> WA6831	SWS	60.8	69.9	0.40	84.9	9.9	52.9	2M	9.16	9.15	
820495	FIELDER (LIND)	C1017268	SWS	64.4	68.8	0.43	81.0	12.7	51.9	1H	9.10	9.40	
820496	URQUIE	C1017413	SWS	64.0	70.2	0.42	83.8	12.6	56.4	1H	8.94	9.22	
820499		<u>6/</u> WA6831	SWS	63.6	68.4	0.40	83.0	13.6	54.0	1H	8.67	9.07	

1/ Observed Values Corrected to 14% Moisture Basis.

5/ Particularly Promising Overall Quality Characteristics.

3/ Absorption at 14% Moisture Corrected to 10% Protein.

6/ Promising Overall Quality Characteristics.

4/ Observed Values Corrected to 10% Protein.

COMMENTS: WA6831 selections appear very similar to Fielder in milling quality and about equal to both Fielder and Urquie in baking quality.



NURSCO 18

PND, MOR, KAL, STL, HEG

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	MTYPE	FABS	FPEAK
820500	KHARKOF	C1001442	HRW	62.2	68.6	0.41	80.4	11.3	57.8	2H	63.7	3.1
820501	WANSER	C1013844	HRW	63.0	71.2	0.41	83.9	10.7	59.9	4H	63.3	8.4
820502	WESTON	C1017727	HRW	64.1	71.4	0.40	85.0	11.2	62.4	2H	69.1	4.2
820503	BEZ//BURT/178383/3/ARK	6/ ID51021	HRW	63.3	71.0	0.41	83.9	11.6	62.2	2H	72.0	4.6
820504	BEZ//BURT/178383/3/ARK	ID51022	HRW	62.7	62.0	0.36	70.4	11.8	60.7	3H	61.2	4.6
820505	TRIUMPH/LANCER, SEL. 126	OR0792	HRW	62.3	66.0	0.36	77.5	9.9	58.3	6M	58.2	5.5
820506	FRD/BEZ	MT77002	HRW	62.8	73.6	0.39	88.7	10.6	58.1	4M	62.4	7.4
820507	C 61-9/MLT//CRT	MT77066	HRW	62.9	70.9	0.43	82.8	10.1	58.5	3M	63.9	2.9
820508	WINRIDGE	6/ C1017902	HRW	63.0	71.6	0.41	84.8	10.2	57.6	2H	64.8	3.0
820509	BEZ/SPRAGUE, SEL. 18-24	OR7921	HRW	62.8	68.1	0.39	80.3	10.2	57.9	2M	62.7	2.5
820510	CLARIFEN/WA5836, SEL. 27-26	OR7925	HRW	59.8	70.6	0.42	83.2	9.7	57.0	7M	61.9	1.0
820511	BEZ/REW, SEL. 42-31	OR7930	HRW	62.2	69.0	0.36	82.2	9.7	55.5	5M	56.5	1.5
820512	2CNU/PI178383/3/WRR//KO/PI17	5/ ID0215	HRW	62.8	72.6	0.43	84.8	10.3	60.2	5H	61.1	6.5
820513	SNW/TD//3*IT/PI178383	ID0216	HRW	62.9	72.6	0.43	85.6	11.5	57.4	2H	65.7	4.5
820514	A667 W-46/RANGER	ID0217	HRW	64.5	74.5	0.42	89.2	10.3	57.8	7M	61.0	5.5
820515	WA4765/3/BEZ//BURT/178383	ID3518	HRW	60.7	68.2	0.41	78.0	10.2	57.3	6M	57.2	5.8
820516	173467//GNS//WSR/4/NRN10/ETC.	WA6815	HRW	63.0	72.7	0.41	86.2	10.6	59.0	3H	63.1	4.6
820517	ID5012/WA5866	6/ WA6816	HRW	61.4	73.2	0.42	87.4	9.9	58.6	2H	63.9	3.7
820518	WA5840/CERCO	WA6817	HRW	62.1	71.2	0.42	83.9	9.8	57.8	8M	62.0	5.6
820519	DLM/PI173438//CLM/3/DLM/4/ETC.	6/ UT125512	HRW	63.2	70.7	0.39	84.6	10.4	59.8	5H	63.6	8.5
820520	DLM/PI173438//CLM/3/DLM/ETC.	6/ UT125327	HRW	62.9	70.2	0.39	83.4	10.6	60.5	4H	64.9	7.5
820521	NAJAH/HNL//BGR/C113837	6/ UT125911	HRW	63.5	71.5	0.41	85.0	10.8	60.3	2H	68.1	3.4
820522	SM4/TD//3*IT/PI178383	ID0242	HRW	63.2	72.7	0.43	85.9	11.0	57.7	2H	65.6	4.3
820523	C114106/CLM//MC/3/BGR	6/ ID0243	HRW	61.8	72.1	0.42	85.3	10.3	60.2	6M	63.2	6.6
820524	JEFF/COULEE//ID0033	ID0244	HRW	63.5	71.9	0.42	84.4	8.8	59.9	4M	62.5	1.0
820526	CERCO/C1017271, N7802401	WA6913	HRW	62.4	71.1	0.44	83.0	9.7	57.3	4M	60.6	6.4
820525	1160-155/C114106//MC/6/ETC.	6/ ID0245	HRW	63.7	72.6	0.41	86.4	10.5	59.8	6M	62.3	7.0
820527	ALBA/GNS//FN/SONORA 64	ORCR8107	HRW	62.9	72.0	0.42	84.5	10.3	58.1	2H	67.2	3.2

1/ Observed values Corrected to 14% Moisture Basis.

5/ Particularly Promising Overall Quality Characteristics.

3/ Absorption at 14% Moisture Corrected to 10% Protein.

6/ Promising Overall Quality Characteristics.

4/ Observed values Corrected to 10% Protein.





NURSCO 18

PND, MOR, KAL, STL, HEG

LABNUM	VARIETY	IDNO	CLASS	FSTAB	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR	RMKS
						3/			4/		
820500	KHARKOF	C1001442	HRW	4.5	62.8	61.5	3.0	965	891	4	
820501	WANSER	C1013844	HRW	7.6	64.3	63.6	3.5	950	902	3	
820502	WESTON	C1017727	HRW	6.6	65.8	64.6	2.1	1050	976	2	
820503	BEZ//BURT/178383/3/ARK	ID51021	HRW	4.0	67.0	65.4	2.5	1000	901	2	CRUMB (yellow)
820504	BEZ//BURT/178383/3/ARK	ID51022	HRW	6.9	63.2	61.4	2.7	1098	986	2	V. Poor milling
820505	TRIUMPH/LANCER, SEL. 126	OR0792	HRW	7.8	59.4	59.5	3.1	963	969	4	Low FYELD, Q-BCRGR
820506	FRD/BEZ	MT77002	HRW	7.6	61.9	61.3	3.5	860	823	4	Low LVOL&BCRGR
820507	C 61-9/MLT//CRT	MT77066	HRW	3.3	62.3	62.2	2.3	955	949	4	CRUMB (yellow) Q-FYELD
820508	WINRIDGE	C1017902	HRW	3.5	63.0	62.8	2.5	930	918	4	Q-BCRGR
820509	BEZ/SPRAGUE, SEL. 18-24	OR7921	HRW	2.3	61.1	60.9	1.7	905	893	5	L-FYELD&P-BCRGR
820510	CLARIFEN/WA5836, SEL. 27-26	OR7925	HRW	1.9	59.9	60.2	3.8	850	869	7	L-LVOL&BCRGR
820511	BEZ/REW, SEL. 42-31	OR7930	HRW	6.3	57.4	57.7	2.8	835	854	7	L-LVOL&BCRGR
820512	2CNN/PI178383/3/WRR//KO/PI17	ID0215	HRW	12.0	62.7	62.4	3.9	950	931	2	
820513	SM4/TD//3*IT/PI178383	ID0216	HRW	4.0	62.6	61.1	2.6	970	877	4	Q-LVOL&BCRGR
820514	A667 W-46/RANGER	ID0217	HRW	12.3	62.8	62.5	4.7	900	881	5	P-BCRGR
820515	WA4765/3/BEZ//BURT/178383	ID3518	HRW	6.0	59.7	59.5	3.7	925	913	4	P-MILLING&BCRGR
820516	173467//GNS//WSR/4/NRN10/ETC.	WA6815	HRW	5.7	61.8	61.2	2.6	880	843	6	P-LVOL&BCRGR
820517	ID5012/WA5866	WA6816	HRW	4.6	61.2	61.3	2.3	940	946	3	Q-BCRGR
820518	WA5840/CERCO	WA6817	HRW	9.4	61.8	62.0	4.4	845	857	5	P-LVOL&BCRGR
820519	DLM/PI173438//CLM/3/DLM/4/ETC.	UT125512	HRW	14.0	63.4	63.0	4.5	960	935	2	
820520	DLM/PI173438//CLM/3/DLM/ETC.	UT125327	HRW	6.4	64.8	64.2	4.1	1030	993	2	
820521	NAJAH/HNL//BGR/CI13837	UT125911	HRW	2.9	64.8	64.0	2.2	1018	968	3	Q-BCRGR
820522	SM4/TD//3*IT/PI178383	ID0242	HRW	3.8	61.9	60.9	2.3	933	871	4	P-LVOL&BCRGR
820523	CI14106/CLM/MC/3/BGR	ID0243	HRW	11.5	64.7	64.4	4.1	933	914	3	Q-BCRGR
820524	JEFF/COULEE/ID0033	ID0244	HRW	1.5	65.4	66.6	7.9	763	837	8	P-LVOL&BCRGR
820526	CERCO/CI017271, N7802401	WA6913	HRW	8.1	61.2	61.5	3.7	885	904	2	
820525	1160-155/CI14106//MC/6/ETC.	ID0245	HRW	10.5	65.5	65.0	4.5	923	892	2	
820527	ALBA/GNS//FN/SONORA 64	ORCR8107	HRW	2.7	62.6	62.3	2.6	880	861	6	Q-LVOL&BCRGR

## COMMENTS:

Equal amounts of seed were composited from nurseries grown at Pendleton and Moro, OR, Kalispell, and Stillwater, MT, and Heglar, ID. The deficiencies of the selections not identified as promising (footnoted in ID No. column) are noted in the Remarks column. Poor loaf volumes and crumb structure were most common, however some selections had poor milling properties as well.

L = Low Q = Questionable P = Poor



NURSCO 19

POM, PEND, MORO, STLWTR

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	MTYPE
820528	KHARKOF	C1001442	HRW	62.2	69.4	0.40	81.8	10.2	56.8	4M
820529	ELGIN	C1011755	CLUB	61.8	72.3	0.40	85.3	8.7	49.2	1M
820530	MORO	C1013740	CLUB	60.1	72.2	0.40	83.8	8.3	48.0	2L
820531	NUGAINES	C1013968	SWW	63.4	69.9	0.39	81.1	7.9	51.9	3L
820532	STEPHENS	C1017596	SWW	59.8	71.4	0.40	81.9	8.4	50.7	2L
820533	FARO	C1017590	CLUB	60.7	71.4	0.37	85.2	7.9	49.1	2L
820534	YAMHILL/HYSLOP (Hill 81)	OR68007	SWW	61.2	72.8	0.39	85.2	8.6	51.0	2L
820535	LEWJAIN	C1017909	SWW	61.7	70.6	0.39	81.1	8.0	51.4	3L
820536	WA4765//BURT/PI178383	ID745318	SWW	59.9	69.7	0.44	77.4	8.1	49.7	3L
820537	CREW	C1017951	CLUB	60.6	72.2	0.40	85.5	7.6	49.7	2L
820538	TYEE	C1017773	CLUB	60.1	72.6	0.38	87.0	7.4	50.9	3L
820539	REW/LUKE, SEL. 305	6/OR7794	SWW	62.1	71.1	0.38	82.8	7.8	51.2	2L
820540	C114482/MORO, SEL. E109	6/OR0797	SWW	62.3	71.1	0.39	82.1	7.9	50.9	2L
820541	DAWS/WA5829, VH079141	6/WA6696	SWW	62.3	71.2	0.40	82.4	7.8	51.6	4L
820542	SAW2/6*0/3/T.SP/CTL//4*0	6/WA6698	CLUB	62.1	72.8	0.40	85.8	7.5	49.9	1L
820543	LUKE/VH76375	5/WA6813	SWW	59.4	74.2	0.40	86.2	7.4	51.0	2L
820544	PAHA/OR6857 SEL. 204	5/OR7792	CLUB	61.1	73.7	0.39	87.2	7.6	49.2	2L
820545	YAYLA/YMH//RBS/YMH/3/REW	5/OR0794	SWW	63.4	73.0	0.39	84.8	8.1	50.5	2L
820546	CJP CLUB/SPRAGUE 3	6/WA6819	SWW	61.8	72.8	0.43	81.5	8.4	48.3	2L
820547	SCT/101//3469/178383/S1, AM07904	6/WA6914	SWW	63.3	73.0	0.43	82.9	7.9	49.7	3M
820548	MARIS HUNTSMAN/VHH74521 ETC.	6/WA6910	SWW	60.9	71.3	0.45	80.3	8.6	50.2	2M
820549	WA6240/NORCO, VJ080129	6/WA6911	SWW	62.2	71.9	0.38	83.4	8.1	48.0	1L
820550	BVR/C115923/NGS, VH074575	6/WA6912	SWW	61.7	70.9	0.39	81.1	7.9	49.7	3L
820551	1523 DRC DWF/YMH	6/ORCW8110	SWW	57.2	71.5	0.41	81.5	8.2	48.7	2L
820552	SPN//63189-66-71/BEZ	6/ORCW8113	SWW	60.4	72.0	0.39	83.1	8.0	48.9	2L
820553	SPN//AURORA/YMH	6/ORCW8114	SWW	57.8	70.8	0.40	80.1	8.7	48.2	2L
820554	1523 DRC/RBS	6/ORCP04	SWW	59.0	71.1	0.40	80.2	8.4	47.7	2L
820555	1523 DRC/RBS	6/ORSEL.835	SWW	59.9	71.3	0.38	81.0	8.5	48.0	2M
820556	SPRAGUE/LUKE//498, B77-136	6/WA6915	SWW	61.1	72.0	0.42	81.2	7.8	47.4	2L
820557	HYS/YAYLA//WA4995/3/CERCO	6/OR7996	SWW	60.4	72.9	0.44	80.9	8.4	48.7	4L
820558	DRC/68-23, OWA68109-1M6, R241	6/OR7956	SWW	57.6	71.2	0.44	80.0	8.3	47.0	3L

1/ Observed Values Corrected to 14% Moisture Basis.

5/ Particularly Promising Overall Quality Characteristics.

3/ Absorption at 14% Moisture Corrected to 8% Protein.

6/ Promising Overall Quality Characteristics.

4/ Observed Values Corrected to 8% Protein.





NURSCO 19

POM, PEND, MORO, STLWTR

LABNUM	VARIETY	IDNO	CLASS	CODI	CODIC	CAVOL	SCSOR	WTIN	NOSCO	RMKS
					4/					
820528	KHARKOF	C1001442	HRW	8.18	8.36	1176	66.0	366	76	
820529	ELGIN	C1011755	CLUB	9.04	9.09	1311	75.0	401	62	
820530	MORO	C1013740	CLUB	9.20	9.23	1271	71.0	393	76	
820531	MUGAINES	C1013968	SWW	8.90	8.89	1161	63.0	380	77	
820532	STEPHENS	C1017596	SWW	8.98	9.03	1331	77.0	384	78	
820533	FARO	C1017590	CLUB	9.00	8.99	1306	74.0	396	79	
820534	YAMHILL/HYSLOP	OR68007	SWW	8.96	9.03	1326	80.0	383	73	
820535	LEWJAIN	C1017909	SWW	9.17	9.17	1271	76.0	374	76	
820536	WA4765//BURT/PI178383	ID745318	SWW	8.77	8.79	1251	73.0	388	73	P-Milling, Q-CODI
820537	CREW	C1017951	CLUB	9.13	9.10	1326	79.0	393	85	
820538	TYEE	C1017773	CLUB	8.96	8.91	1296	78.0	373	77	
820539	REW/LUKE, SEL. 305	OR7794	SWW	8.94	8.92	1336	81.0	383	78	Excellent SCSOR
820540	C114482/MORO, SEL. E109	OR0797	SWW	9.03	9.02	1291	77.0	383	77	
820541	DAWS/WA5829, VH079141	WA6696	SWW	8.72	8.70	1246	73.0	388	82	SL.STRONG, Ex. NOSC
820542	SW92/6*0/3/T. SP/CTL//4*0	WA6698	CLUB	8.82	8.79	1336	80.0	396	81	
820543	LUKE/VH76375	WA6813	SWW	9.06	9.00	1316	80.0	372	80	E-COOKIE, CAKE&NOO
820544	PAHA/OR6857 SEL. 204	OR7792	CLUB	9.21	9.18	1351	80.0	370	79	E-COOKIE, CAKE&NOO
820545	YAYLA/YMH//RBS/YMH/3/REW	OR0794	SWW	8.95	8.96	1296	74.0	368	80	
820546	CJP CLUB/SPRAGUE 3	WA6819	SWW	8.96	9.00	1266	76.0	379	75	
820547	SCT/101//3469/178383/S1, AM07904	WA6914	SWW	8.96	8.95	1216	69.0	377	76	Q-SCSOR
820548	MARIS HUNTSMAN/VHH74521 ETC.	WA6910	SWW	8.43	8.50	1246	74.0	386	78	Q-MSCOR, P-COOKIE
820549	WA6240/NORCO, VJ080129	WA6911	SWW	9.23	9.24	1331	79.0	402	80	E-COOKIE, CAKE&NOO
820550	BVR/C115923/NGS, VH074575	WA6912	SWW	9.28	9.27	1286	75.0	377	76	
820551	1523 DRC DWF/YMH	ORCW8110	SWW	9.20	9.22	1326	78.0	400	81	E-COOKIE, CAKE&NOO
820552	SPN//63189-66-71/BEZ	ORCW8113	SWW	8.97	8.97	1281	77.0	390	79	
820553	SPN//AURORA/YMH	ORCW8114	SWW	8.96	9.04	1311	78.0	372	76	Q-FYELD
820554	1523 DRC/RBS	ORCP04	SWW	8.89	8.93	1316	79.0	365	70	Q-NOODLE SCORE
820555	1523 DRC/RBS	ORSEL.835	SWW	9.02	9.07	1331	79.0	364	70	Q-NOODLE
820556	SPRAGUE/LUKE//498, B77-136	WA6915	SWW	9.22	9.20	1166	67.0	378	78	P-SPONGE CAKE
820557	HYS/YAYLA//WA4995/3/CERCO	OR7996	SWW	8.89	8.94	1226	71.0	353	75	
820558	DRC/68-23, OWW68109-1M6, R241	OR7956	SWW	8.81	8.84	1336	80.0	361	72	Q-NOODLE

COMMENTS: Equal amounts of seed were composited from nurseries grown at Pomeroy, WA, Pendleton and Moro, OR, and Stillwater, MT. Entries were evaluated for milling quality, cookie and Japanese sponge cake baking, and noodle (Udon) making properties. See the Remarks column for deficiencies and noted excellence.

E = Excellent Q = Questionable P = Poor





NURSCO 20

CA

D. SHERMAN

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE
820559 WESTBEND-911		ML2-248	HRS	64.6	67.2	0.47	74.1	11.6	59.4	4H
820560 KLASIC		CA82-51	HWS	62.0	67.3	0.40	77.5	11.0	56.0	8H

1/ Observed Values Corrected to 14% Moisture Basis. 5/ Particularly Promising Overall Quality Characteristics.

3/ Absorption at 14% Moisture Corrected to 11% Protein. 6/ Promising Overall Quality Characteristics.

4/ Observed Values Corrected to 11% Protein.

COMMENTS:

These samples of Westbend-911 and Klastic were received from Western Grain Marketing Inc., Stockton, CA for overall quality evaluations. Flour yield of both were 3-5% lower than expected for good milling wheats. Baking properties of both were acceptable, but Klastic was superior to Westbend-911 in loaf volume and poor in water absorption.



USDA, SEA AR  
WESTERN WHEAT QUALITY LAB.  
PULLMAN, WA.

WESTERN GRAIN MARKETING

CONTD. PAGE 1

NURSCO 20

CA

D. SHERMAN

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR	RMKS
					<u>3/</u>			<u>4/</u>		
820559	WESTBEND-911	ML2-248	HRS	69.2	68.6	4.5	978	941	2	
820560	KLASIC	CA82-51	HWS	59.2	59.2	6.9	1093	1093	2	



NURSCO 21

KS, TX, NE, OK, CARG.

LABNUM	VARIETY	IDNO	CLASS	FASH 1/	FPROT 1/	FABS	FPEAK	FSTAB	MABSC 3/	MTYPE
820561	CONTROL--KANSAS	6/82-716	HRW	0.39	10.1	53.5	8.5	24.5	61.9	8M
820562	EXPERIMENTAL	6/82-717	HRW	0.42	11.2	55.7	7.0	14.5	61.9	5H
820563	CONTROL--TEXAS	5/82-718	HRW	0.44	12.5	61.7	7.5	9.0	63.8	5H
820564	EXPERIMENTAL	5/82-719	HRW	0.41	12.4	61.1	7.0	11.0	62.4	5H
820565	EXPERIMENTAL	6/82-720	HRW	0.39	12.1	57.3	5.0	8.0	59.2	4H
820566	EXPERIMENTAL	6/82-721	HRW	0.39	12.2	56.6	5.0	7.5	59.3	4H
820567	CONTROL--NEBRASKA	5/82-722	HRW	0.48	12.2	57.7	5.0	9.0	61.0	4H
820568	EXPERIMENTAL	5/82-723	HRW	0.50	12.6	59.8	9.0	15.0	60.0	8M
820569	EXPERIMENTAL	6/82-724	HRW	0.48	12.7	56.2	8.0	13.5	59.4	6M
820570	EXPERIMENTAL	6/82-725	HRW	0.49	12.5	56.5	8.0	23.0	58.5	7M
820571	CONTROL--OKLAHOMA	82-726	HRW	0.45	12.9	59.0	12.0	27.0	62.1	5H
820572	EXPERIMENTAL	6/82-727	HRW	0.48	13.1	61.0	9.5	17.5	61.5	5H
820573	EXPERIMENTAL	5/82-728	HRW	0.47	12.0	56.6	2.5	38.5	58.6	7H
820574	EXPERIMENTAL	6/82-729	HRW	0.46	12.6	60.6	11.0	12.5	61.0	5H
820575	CONTROL--CARGILL	82-730	HRW	0.43	11.5	56.2	9.5	19.0	59.4	4H
820576	EXPERIMENTAL	82-731	HRW	0.43	11.5	61.5	4.5	7.0	60.8	2H
820577	EXPERIMENTAL	6/82-732	HRW	0.44	12.2	58.6	6.0	12.5	61.3	3H

1/ Observed Values Corrected to 14% Moisture Basis.

5/ Particularly Promising Overall Quality Characteristics.

3/ Absorption at 14% Moisture Corrected to 12% Protein.

6/ Promising Overall Quality Characteristics.

4/ Observed Values Corrected to 12% Protein.





NURSCO 21

KS, TX, NE, OK, CARG.

LABNUM	VARIETY	IDNO	CLASS	BABSC 3/	MTIME	LVOL	LVOLC 4/	BCRGR	RMKS
820561	CONTROL--KANSAS	82-716	HRW	63.6	6.1	988	1106	2	
820562	EXPERIMENTAL	82-717	HRW	64.1	4.6	1010	1060	2	
820563	CONTROL--TEXAS	82-718	HRW	65.5	4.1	1100	1069	2	
820564	EXPERIMENTAL	82-719	HRW	64.1	3.9	1130	1105	2	
820565	EXPERIMENTAL	82-720	HRW	61.4	4.0	1025	1019	2	
820566	EXPERIMENTAL	82-721	HRW	62.0	3.5	1060	1048	1	
820567	CONTROL--NEBRASKA	82-722	HRW	62.7	3.7	1065	1053	2	
820568	EXPERIMENTAL	82-723	HRW	62.2	4.3	1065	1028	1	
820569	EXPERIMENTAL	82-724	HRW	60.6	4.1	1075	1032	2	
820570	EXPERIMENTAL	82-725	HRW	60.2	4.6	1110	1079	2	
820571	CONTROL--OKLAHOMA	82-726	HRW	63.3	4.7	1138	1082	2	
820572	EXPERIMENTAL	82-727	HRW	63.7	5.0	1150	1082	2	
820573	EXPERIMENTAL	82-728	HRW	60.8	6.8	1145	1145	2	
820574	EXPERIMENTAL	82-729	HRW	62.2	4.2	1100	1063	2	
820575	CONTROL--CARGILL	82-730	HRW	62.1	4.0	1065	1096	2	
820576	EXPERIMENTAL	82-731	HRW	62.5	1.2	1060	1091	2	Short Mixing
820577	EXPERIMENTAL	82-732	HRW	63.5	2.8	1120	1108	2	

COMMENTS: Evaluated in co-operation with the Hard Winter Wheat Quality Council, Manhattan, KS. Farinograph data was provided by the Hard Winter Wheat Quality Council Committee with the samples. All samples except Cargill 82-731 were judged as acceptable and promising in bread baking quality. Sample 82-731 was very short in dough mixing requirement and in stability; however, loaf volume and crumb grain were acceptable.



NURSCO 22

CA

M. BEAN

LABNUM	VARIETY	IDNO	CLASS	MABSC	MTYPE	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR	RMKS
				3/			3/			4/		
820578	YECORA ROJO	PLOT 1	HRS	59.4	6H	65.3	66.1	5.8	948	998	1	
820579	YECORA ROJO	PLOT 2	HRS	61.1	6H	65.0	65.3	6.4	972	991	2	
820580	YECORA ROJO	PLOT 3	HRS	61.6	6H	65.9	65.8	5.1	1010	1004	2	
820581	YECORA ROJO	PLOT 4	HRS	63.6	6H	66.9	67.8	6.3	928	984	2	
820582	YECORA ROJO	PLOT 5	HRS	62.2	6H	67.3	67.9	6.3	908	945	2	
820583	YECORA ROJO	PLOT 6	HRS	62.5	6H	68.3	68.2	5.8	983	977	1	
820584	YECORA ROJO	PLOT 7	HRS	61.7	5H	66.5	65.9	5.4	1008	971	1	
820585	YECORA ROJO	PLOT 8	HRS	62.2	8M	65.8	66.9	5.9	923	991	2	
820586	YECORA ROJO	PLOT 9	HRS	61.6	8M	65.6	66.3	6.1	943	986	2	
820587	YECORA ROJO	PLOT 10	HRS	63.5	6H	67.0	67.7	6.2	938	981	2	
820588	YECORA ROJO	PLOT 11	HRS	63.7	6H	67.4	68.4	6.0	928	990	1	
820589	YECORA ROJO	PLOT 12	HRS	62.5	6H	66.4	67.7	7.0	885	966	3	
820590	YECORA ROJO	PLOT 13	HRS	61.9	6H	65.2	66.1	5.4	943	999	1	
820591	YECORA ROJO	PLOT 14	HRS	61.3	6H	65.4	65.5	5.4	963	969	1	
820592	YECORA ROJO	PLOT 15	HRS	64.2	6H	68.4	68.4	5.9	1000	1000	1	
820593	YECORA ROJO	PLOT 16	HRS	63.1	6H	68.4	68.3	5.3	1010	1004	1	
820594	YECORA ROJO	PLOT 17	HRS	63.6	6H	68.4	68.3	5.6	983	977	2	
820595	YECORA ROJO	PLOT 18	HRS	63.3	6H	69.0	68.5	5.4	1018	987	1	



NURSCO 22

CA

M. BEAN

LABNUM	VARIETY	IDNO	CLASS	TWT	WPROT	FYIELD	FASH 1/	MSCOR	FPROT 1/	FABS	FPEAK	FSTAB
820578	YECORA ROJO	PLOT 1	HRS	64.6	11.4	69.2	0.44	77.1	10.2	60.2	10.5	22.0
820579	YECORA ROJO	PLOT 2	HRS	65.0	11.9	71.9	0.43	83.4	10.7	62.5	9.8	22.0
820580	YECORA ROJO	PLOT 3	HRS	65.0	12.6	70.5	0.41	82.1	11.1	64.8	12.5	19.0
820581	YECORA ROJO	PLOT 4	HRS	65.0	11.1	72.1	0.44	83.9	10.1	64.0	9.3	21.0
820582	YECORA ROJO	PLOT 5	HRS	65.0	11.3	71.0	0.44	82.1	10.4	64.6	8.9	14.5
820583	YECORA ROJO	PLOT 6	HRS	64.9	12.5	70.2	0.44	81.2	11.1	66.0	14.0	23.0
820584	YECORA ROJO	PLOT 7	HRS	65.1	13.1	72.8	0.43	85.8	11.6	65.7	14.5	15.5
820585	YECORA ROJO	PLOT 8	HRS	65.1	10.7	72.1	0.44	83.8	9.9	62.7	8.0	13.5
820586	YECORA ROJO	PLOT 9	HRS	65.3	11.3	71.2	0.43	83.4	10.3	63.1	11.6	13.7
820587	YECORA ROJO	PLOT 10	HRS	65.2	11.3	71.4	0.43	83.0	10.3	63.6	13.0	19.0
820588	YECORA ROJO	PLOT 11	HRS	65.1	10.6	71.5	0.43	83.5	10.0	63.4	11.5	14.3
820589	YECORA ROJO	PLOT 12	HRS	65.2	11.2	69.9	0.44	80.3	9.7	64.0	11.0	30.6
820590	YECORA ROJO	PLOT 13	HRS	65.1	10.7	72.2	0.45	83.8	10.1	61.8	16.5	23.3
820591	YECORA ROJO	PLOT 14	HRS	64.6	12.5	72.4	0.44	84.6	10.9	63.4	9.3	15.4
820592	YECORA ROJO	PLOT 15	HRS	65.1	12.1	71.8	0.44	84.1	11.0	64.7	14.0	23.0
820593	YECORA ROJO	PLOT 16	HRS	64.4	11.7	71.2	0.42	84.0	11.1	64.5	12.6	20.0
820594	YECORA ROJO	PLOT 17	HRS	64.5	12.4	71.8	0.44	83.5	11.1	64.3	11.0	22.0
820595	YECORA ROJO	PLOT 18	HRS	64.7	12.7	71.9	0.44	84.4	11.5	65.8	11.0	14.0

1/ Observed Values Corrected to 14% Moisture Basis.

5/ Particularly Promising Overall Quality Characteristics.

3/ Absorption at 14% Moisture Corrected to 11% Protein.

6/ Promising Overall Quality Characteristics.

4/ Observed Values Corrected to 11% Protein.

COMMENTS:

These evaluations were made in co-operation with the USDA, ARS Western Regional Research Center, Albany, CA.

Wheat was from researchers at Riverside, CA who were studying effects of salinity imparted by irrigation water from the Alamo and Colorado rivers. Plots 1 and 12 were low in flour yield, with plots 3 and 6 also slightly lower than the remaining material. Wheat protein varied from 10.6% (plot 11) to 13.1% (plot 7),

a wide range if no other treatment was involved. After correcting loaf volume for protein (LVOLC) little difference in bread baking performance was found, with the exception of plots 5 and 12 which were slightly lower. The samples were coded so conclusions can not be drawn as to the effect of the source of irrigation water on milling and baking quality.





NURSCO 23

CORVALLIS, OR

W.E. KRONSTAD

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	CODI	CODIC	MTYPE	RMKS
						<u>1/</u>		<u>1/</u>	<u>3/</u>		<u>4/</u>		
820596	(82-1) YAMHILL	83SWAYP 3	SWW	58.8	72.3	0.45	84.2	6.9	51.2	9.24	9.12	2L	High ash for Yamhill
820597	(82-10) STEPHENS	83SWAYP 1	SWW	61.6	73.8	0.40	89.5	7.9	51.4	9.31	9.30	2L	
820598	(82-6) YMH/HYS//VPM/MOS4-2-16-1-7	5/83SWAYP 6	SWW	62.4	73.7	0.39	89.9	8.6	50.8	9.20	9.27	3L	
820599	(82-11) TJB 791-1088/SPN	83SWAYP 7	SWW	59.6	67.9	0.37	83.7	7.7	51.4	9.02	8.99	6L	P-FYELD
820600	(82-12) TJB 729-1278/SPN	6/83SWAYP 8	SWW	60.8	71.3	0.35	89.5	7.8	51.6	9.01	8.99	6L	
820601	(82-13) TJB 801-12795/SPN	5/83SWAYP 9	SWW	62.8	75.1	0.39	92.2	8.9	50.5	9.01	9.11	2L	Outstanding FYELD
820602	(82-16) 6720-11//MDA 38/WRM	83SWAYP 10	SWW	62.4	69.5	0.41	83.4	8.2	52.7	9.06	9.08	6L	P-MILLING
820603	(82-35) HYS/CER, F1//YMH/HYS	6/83SWAYP 11	SWW	62.0	72.0	0.41	86.6	8.1	51.2	9.17	9.19	5L	
820604	(82-36) HYS/CER, F1//YMH/HYS	6/83SWAYP 12	SWW	61.2	71.2	0.43	84.4	7.2	52.4	9.00	8.91	3L	
820605	(82-42) 6720/HYS//R37/GHL1, F1/3/SPN	6/83SWAYP 13	SWW	59.2	70.9	0.36	88.5	7.4	49.9	9.49	9.42	2L	Excellent cookie di
820606	(82-43) 6720-10//YMH/HYS	6/83SWAYP 14	SWW	62.8	71.8	0.38	88.4	7.0	52.3	9.16	9.05	5L	
820607	(82-44) YMH/63-112-66-2/3/VG8881/HN1V//P	83SWAYP 15	SWW	63.2	73.1	0.44	85.9	8.2	50.5	9.14	9.16	3L	
820608	(82-66) HYS//R37/GHL1	6/83SWAYP 16	SWW	60.4	70.4	0.38	86.6	7.5	50.2	9.47	9.42	1L	Q-MILLING
820609	(82-97) RDL/SW7107//ND/VG9144	6/83SWAYP 17	SWW	62.8	74.0	0.41	89.5	7.3	52.0	9.34	9.26	2L	
820610	(82-116) TJB801/1332//1523DRCDWF/6720-69	83SWAYP 18	SWW	58.8	71.2	0.36	89.0	6.5	52.8	9.35	9.18	5L	
820611	(82-128) TJB841/1543//WA5987	5/83SWAYP 19	SWW	61.6	72.1	0.37	89.0	6.5	51.9	9.39	9.22	5L	
820612	(82-131) TJB841/1543//WA5987	6/83SWAYP 20	SWW	60.4	72.2	0.38	88.5	6.6	51.8	9.29	9.13	5L	
820613	(82-132) TJB841/1543//WA5987	6/83SWAYP 21	SWW	62.8	70.4	0.40	85.3	6.8	53.5	9.22	9.09	6L	Q-MILLING
820614	(82-133) "	83SWAYP 22	SWW	62.4	71.1	0.39	86.7	6.4	54.5	8.92	8.75	6L	Q-COOKIE DIA.
820615	(82-134) "	83SWAYP 23	SWW	60.4	70.7	0.38	87.1	6.3	53.7	9.06	8.88	6L	Q-MILL & COOKIE DIA
820616	(82-137) TW238/3D//NRT/6720	5/83SWAYP 24	SWW	62.4	73.1	0.38	90.0	7.1	53.3	9.25	9.15	5L	
820617	(82-147) YMH/63-112-66-2//CERCO	83SWAYP 26	SWW	62.8	73.7	0.42	88.5	7.1	54.2	8.57	8.48	6L	P-COOKIE DIA.
820618	(82-149) YMH/63-112-66-2//CERCO	6/83SWAYP 27	SWW	61.2	71.1	0.39	86.7	7.8	53.0	9.01	8.99	6L	
820619	(82-151) "	6/83SWAYP 28	SWW	62.0	71.9	0.41	86.3	7.4	52.6	9.30	9.23	5L	
820620	(82-158) OR SRYT 168/OR SRYT 15	5/83SWAYP 29	SWW	60.4	74.0	0.41	89.1	7.6	51.4	9.44	9.39	8L	Outstanding FYELD
820621	(82-161) MBC//61-1523/DRC, F1/3/WA5987	83SWAYP 30	SWW	61.2	68.6	0.41	82.5	7.3	54.7	8.80	8.72	8L	P-FYELD
820622	(82-177) TJB801-1332/YMH, F1/3/F1(1523/DCR	6/83SWAYP 31	SWW	60.0	71.2	0.41	85.9	8.0	53.3	9.21	9.21	6L	Q-FYELD
820623	(82-182) TJB801-1332/YMH, F1//P1167822	83SWAYP 32	SWW	58.8	69.9	0.40	84.4	7.5	52.9	9.12	9.07	4L	P-FYELD
820624	(82-183) "	83SWAYP 33	SWW	57.2	70.4	0.41	84.4	7.2	53.6	9.21	9.12	4L	Q-FYELD
820625	(82-188) YMH//HNVI1/CD, F1/3/C114106	5/83SWAYP 34	SWW	58.4	72.3	0.36	90.2	7.2	53.7	9.25	9.16	8L	
820626	(82-189) 68-1846/63-1122-66-2//RDL/SW,	5/83SWAYP 35	SWW	62.0	72.7	0.37	90.3	7.9	53.0	9.07	9.06	3L	
820627	(82-197) YMH//HNVI1/CD, F1/3/F1(1523/DCR	6/83SWAYP 36	SWW	60.8	72.9	0.36	90.7	8.6	53.2	9.10	9.17	2L	
820628	(82-213) TJB259-83/3/CD/P101//DRC	6/83SWAYP 37	SWW	62.8	70.1	0.38	86.2	7.6	52.9	9.11	9.07	4L	Q-FYELD
820629	(82-223) TJB801-1332//NDD/P101	6/83SWAYP 38	SWW	59.6	70.5	0.37	87.0	7.2	52.6	9.41	9.32	3L	Q-FYELD
820630	(82-225) TJB842-12915//NDD/P101	5/83SWAYP 39	SWW	60.4	74.4	0.37	92.0	7.1	52.8	9.35	9.25	8L	Outstanding FYELD



NURSCO 23

CORVALLIS, OR

W.E. KRONSTAD

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	CODI	CODIC	MTYPE	RMKS
					<u>1/</u>			<u>1/</u>	<u>3/</u>		<u>4/</u>		
820631	(82-229)	LELY/YMH			59.6	73.3	0.39	89.5	7.4	53.5	9.32	9.26	5L
820632	(82-275)	YMH/BOQUAIN, F1//MARIS NIMROD	SWW	40	59.6	70.4	0.41	84.9	8.5	53.8	9.27	9.33	6L Q-FYELD
820633	(82-282)	YMH/BOQUAIN, F1//MARIS NIMROD	SWW	41	58.8	71.7	0.42	85.9	7.9	53.5	9.22	9.21	5L Q-TWT&FYELD
820634	(82-288)	KVZ/JUACA, F1//KVZ	SWW	43	60.8	73.7	0.39	90.3	7.6	52.3	9.31	9.27	5L
820635	(82-289)	NAD//SU92/BURT/3/CLP	SWW	44	62.3	70.7	0.42	84.4	8.2	52.8	9.15	9.17	6L Q-FYELD
820636	(82-291)	HYS/ISRN1342//CLI	SWW	45	62.0	73.1	0.40	88.9	7.7	53.3	9.36	9.33	4L Q-CODI
820637	(82-292)	SPN//KAL/BB	SWW	46	62.8	72.0	0.36	90.0	7.8	53.2	8.86	8.84	6L Q-CODI
820638	(82-293)	HYS/ISRN1342//PVN	SWW	47	62.8	71.8	0.42	85.6	7.5	53.2	8.59	8.53	8L P-CODI
820639	(82-297)	SPN//MCD/CAMA/3/NAC	SWW	48	62.0	69.2	0.35	86.7	7.7	53.2	9.26	9.23	8L P-FYELD
820640	(82-298)	"	SWW	49	61.6	68.5	0.35	86.0	8.0	53.0	9.39	9.39	8L P-FYELD
820641	(82-306)	CAR193/WOP, F1//SPN	SWW	50	64.4	72.2	0.39	88.1	8.7	53.2	9.16	9.24	5M
820642	(82-307)	N1220/CLLF//WA3/3/OLN, F1/4/LIB	SWW	51	62.4	69.6	0.39	85.1	7.8	53.0	9.19	9.17	3L P-FYELD
820643	(82-312)	V6707/BNN	SWW	52	61.6	70.3	0.43	83.5	8.4	52.8	9.17	9.22	6L Q-FYELD
820644	(82-313)	"	SWW	53	63.2	68.9	0.39	84.0	7.6	52.8	9.64	9.59	5L P-FYELD
820645	(82-322)	"	SWW	54	59.4	67.1	0.43	79.4	8.5	52.3	9.47	9.53	3L P-FYELD
820646	(82-329)	RMN F3-71/TORIM	SWW	55	62.8	67.5	0.41	80.6	8.1	53.0	8.81	8.82	8L P-FYELD&CODI
820647	(82-343)	BENNO/STWALT//TACCA/3/DERBUR/4.	SWW	56	63.6	68.5	0.39	83.6	7.3	53.8	9.15	9.07	3L P-FYELD
820648	(82-368)	ND/P101//KAL/BB	SWW	57	63.2	69.6	0.39	84.9	7.2	53.7	9.22	9.14	6L P-FYELD
820649	(82-385)	TAST/TORIM	SWW	58	63.2	70.3	0.41	84.4	8.1	53.2	9.45	9.46	4L Q-FYELD
820650	(82-386)	"	SWW	59	63.4	70.4	0.40	85.0	7.8	53.1	9.35	9.33	4L Q-FYELD
820651	(82-398)	HIM//KAL/BB	SWW	60	60.4	69.1	0.37	85.2	7.0	52.9	9.19	9.08	8L P-FYELD
820652	(82-399)	"	SWW	61	59.8	71.8	0.40	87.0	6.9	53.3	9.36	9.24	8L
820653	(82-407)	ND/P101//BB/GLL	SWW	62	62.0	71.4	0.40	86.6	7.0	53.8	9.42	9.31	8L
820654	(82-408)	ND/P101//7C	SWW	63	61.6	73.2	0.42	87.8	7.7	52.0	9.35	9.32	5L
820655	(82-409)	"	SWW	64	62.8	72.7	0.40	88.0	8.0	51.8	9.26	9.26	5L
820656	(82-411)	YMH/MCS	SWW	65	63.2	68.9	0.35	86.4	8.8	54.0	9.02	9.11	6L P-FYELD
820657	(82-413)	BCS/SORT 12-13//EMEK 132	SWW	66	62.8	67.4	0.39	81.8	7.6	52.8	9.07	9.03	3L P-FYELD
820658	(82-421)	MARIS NIMRON/GRAJO S	SWW	67	65.4	69.9	0.39	85.5	8.6	53.8	9.27	9.34	6L Q-FYELD

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 8% Protein. 5/ Particularly Promising Overall Quality Characteristics.

4/ Observed Values Corrected to 8% Protein. 6/ Promising Overall Quality Characteristics.

COMMENTS: There are many of these selections with good overall soft white wheat quality characteristics. Note the footnote and Remark column.

P = Poor, Q = Questionable



NURSCO 24

CORVALLIS, OR

W.E. KRONSTAD

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	MTYPE
820659	(82-1) WANSER	83HRELT1	HRW	64.1	70.3	0.37	85.6	9.3	58.2	8M
820660	(82-14) HATTON	83HRELT4	HRW	65.8	69.9	0.38	84.5	9.3	59.5	8M
820661	(82-8) 55-1744/7C//SUW/ROED	83HRELT5	HRW	63.7	65.2	0.38	76.3	7.8	59.7	5M
820662	(82-9) AU/ERA	83HRELT6	HRW	64.4	68.7	0.38	84.3	8.5	58.0	6L
820663	(82-10) AU/ERA	83HRELT7	HRW	64.0	68.6	0.32	86.2	7.9	57.6	6L
820664	(82-12) 55-1744/7C//SUW/ROED	83HRELT8	HRW	63.6	64.2	0.37	76.5	7.3	62.1	4L
820665	(82-15) INIA 66R//HBCN/CD	83HRELT10	HRW	61.2	69.6	0.40	83.4	8.6	57.7	6L
820666	(82-16) RIEB/YMH, F1//NDD/1*C11348	83HRELT11	HRW	63.6	69.6	0.40	83.0	8.7	61.8	8L
820667	(82-17) 55-1744/77C//SUW/ROED	83HRELT12	HRW	63.6	68.9	0.38	82.6	9.8	59.0	3M
820668	(82-18) PROBSTORFEREXTREM/TOB66	83HRELT13	HRW	64.9	70.4	0.41	83.9	8.6	60.8	8L





NURSCO 24

CORVALLIS, OR

W.E. KRONSTAD

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR	RMKS
					<u>3/</u>			<u>4/</u>		
820659 (82-1) WANSER		83HRELT1	HRW	60.7	60.4	4.9	860	841	2	
820660 (82-14) HATTON		83HRELT4	HRW	62.0	61.7	5.6	810	791	2	
820661 (82-8) 55-1744/7C//SUW/ROED		83HRELT5	HRW	60.7	61.9	3.4	530	604	9VP-FYELD, LVOL&BCRGR	
820662 (82-9) AU/ERA		83HRELT6	HRW	59.7	60.2	5.1	605	636	9VP-LVOL&BCRGR	
820663 (82-10) AU/ERA		83HRELT7	HRW	58.7	59.8	5.4	565	633	9VP-LVOL&BCRGR	
820664 (82-12) 55-1744/7C//SUW/ROED		83HRELT8	HRW	62.6	64.3	3.9	550	655	9VP-FYELD, LVOL&BCRGR	
820665 (82-15) INIA 66R//HBGN/CD		83HRELT10	HRW	59.5	59.9	5.0	620	645	9VP-LVOL&BCRGR	
820666 (82-16) RIEB/YMH, F1//NDD/1*C11348		83HRELT11	HRW	63.7	64.0	6.3	740	759	7VP-LVOL&BCRGR	
820667 (82-17) 55-1744/77C//SUW/ROED		83HRELT12	HRW	62.0	61.2	2.9	745	695	8VP-LVOL&BCRGR	
820668 (82-18) PROBSTORFEREXTREM/TOB66		83HRELT13	HRW	62.6	63.0	8.0	705	730	7VP-LVOL&BCRGR	

1/ Observed Values Corrected to 14% Moisture Basis.5/ Particularly Promising Overall Quality Characteristics.3/ Absorption at 14% Moisture Corrected to 9% Protein.6/ Promising Overall Quality Characteristics.4/ Observed Values Corrected to 9% Protein.

## COMMENTS:

None of these selections are acceptable as hard red winter wheat. While the protein level of the nursery was low there is little doubt that higher protein will correct the poor loaf volume and crumb and grain structure of these wheats.

VP= Very Poor



NURSCO 25

CORVALLIS, OR

W.E. KRONSTAD

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	CODI	CODIC 4/	MTYPE	RMKS
820669 (82-11)	STEPHENS												
820670 (82-7)	DAWS	83SWELT2	SWW	62.2	71.2	0.40	81.8	8.1	50.5	8.87	8.88	5L	
820671 (82-16)	P101/ANZA	83SWELT3	SWW	62.5	72.1	0.40	83.9	7.3	49.8	8.67	8.60	5L	
820672 (82-18)	NDDD/P101//V6400-6-2-33	6/83SWELT22	SWW	62.8	72.6	0.38	85.5	7.3	54.3	8.67	8.60	5L	
820673 (82-23)	YS/YAYLA//63-112-66-4/3/HYSSF...	5/83SWELT23	SWW	64.2	73.4	0.36	88.3	6.9	51.1	8.97	8.85	8L	
		83SWELT24	SWW	62.7	71.3	0.41	82.0	7.8	52.4	8.60	8.58	8L	
820674 (82-24)	65-116-70-MBW-2/RIEB, F1//65	6/83SWELT25	SWW	63.0	71.1	0.39	81.4	8.0	52.4	9.05	9.05	8L	
820675 (82-39)	CLEO/PCHU	83SWELT26	SWW	62.4	67.3	0.42	74.8	8.9	51.6	8.56	8.66	8L	P-FYELD
820676 (82-47)	NOR/YMH//6720-13	83SWELT27	SWW	63.0	69.9	0.38	80.7	8.4	52.7	8.86	8.91	6L	P-FYELD
820677 (82-50)	1879/3/MY54/CD//PCU/4/TORIM	5/83SWELT28	SWW	63.2	68.0	0.44	74.7	8.4	52.7	8.09	8.13	6L	P-FYELD&Codi
820678 (82-53)	ND/P101//BB/GLL	83SWELT29	SWW	64.8	73.0	0.38	87.2	8.9	52.3	8.56	8.66	7L	EXCELLENT FYELD
820679 (82-54)	"	5/83SWELT30	SWW	63.2	74.0	0.40	87.0	8.1	51.9	8.69	8.70	5L	EXCELLENT FYELD
820680 (82-55)	"	5/83SWELT31	SWW	62.1	73.0	0.41	83.9	7.8	50.3	8.82	8.80	5L	EXCELLENT FYELD
820681 (82-57)	ND/P101//7C	83SWELT32	SWW	61.5	70.7	0.40	79.8	8.1	49.8	8.91	8.92	8L	Q-FYELD
820682 (82-58)	OFN/4/YT54/3/NI0B/LR//MFO/5/DJ..	83SWELT33	HWW	64.4	70.3	0.44	80.6	8.3	51.5	8.17	8.20	3M	Q-FYELD& P-CODI

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 8% Protein.

4/ Observed Values Corrected to 8% Protein.

5/

Particularly Promising Overall Quality Characteristics.

6/ Promising Overall Quality Characteristics.

COMMENTS: The selections noted with footnotes are equal to or better than Daws and Stephens in overall quality.

Selections 83SWELT28 and 33 are poor cookie bakers. Others not noted have weaknesses in milling.

P = Poor, Q = Questionable



NURSCO 26

CORVALLIS, OR

W.E. KRONSTAD

LABNUM	VARIETY	IDNO	CLASS	TWT	FYIELD	FASH	MSCOR	FPROT	MABSC	MTYPE
						<u>1/</u>		<u>1/</u>	<u>3/</u>	
820683 (82-1)	WANSER	83SWELT1	HRW	64.7	71.3	0.37	85.8	8.9	57.7	8L
820684 (82-4)	HD832/ON//BB/3/DRC*2/7C/3/BUKATL	83SWELT14	HRW	63.6	69.3	0.39	83.1	8.9	57.1	6L
820685 (82-6)	ALBA/GNS//FN/SON 64	83SWELT15	HRW	64.1	69.8	0.39	84.0	7.9	57.7	3L
820686 (82-8)	S148/PICH S	83SWELT16	HRW	64.9	68.5	0.38	81.5	7.6	57.4	5L
820687 (82-9)	MILD/3/YMH//RIEB/WA4995/4/SWO...	83SWELT17	HRW	61.9	72.2	0.39	86.5	9.0	57.0	8L
820688 (82-10)	ROM F9-70//CNO S/GALLO	83SWELT18	HRW	64.7	71.8	0.39	86.7	10.2	58.8	4M
820689 (82-11)	55-1744/7C//SUW/ROED	83SWELT19	HRW	62.3	66.7	0.40	78.0	9.1	57.4	3M
820690 (82-14)	1150-25/TH//MAG27/3/LOM11	83SWELT28	HRW	64.4	69.7	0.39	85.3	9.1	56.8	3M
820691 (82-15)	CAR853/TORIM	83SWELT27	HRW	64.3	68.7	0.41	81.4	9.1	58.2	4M
820692 (82-17)	MARNE DEPREZ/COLOTANA//PICH S	6/83SWELT20	HRW	63.6	70.9	0.39	84.7	10.4	58.6	8M
820693 (82-18)	ROM F9-70/ZOPILOTE S	83SWELT21	HRW	64.3	72.4	0.38	88.1	8.8	59.0	6M
820694 (82-22)	ROM F9-70//CNO S/GALLO	83SWELT22	HRW	64.4	70.6	0.41	83.5	9.7	59.3	4M
820695 (82-23)	PROBSTORFER EXTREM/TOB66	83SWELT23	HRW	65.8	71.9	0.38	87.9	8.7	57.9	8L
820696 (82-24)	"	83SWELT24	HRW	65.3	71.6	0.40	86.5	8.8	58.3	8L
820697 (82-25)	CNO/PF//ASP	83SWELT25	HRW	61.9	71.7	0.40	84.8	9.7	58.6	4M
820698 (82-26)	TAST/ANZA	83SWELT26	HRW	64.7	69.5	0.40	81.7	8.6	56.2	3M





NURSCO 26

CORVALLIS, OR

W.E. KRONSTAD

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR	RMKS
					<u>3/</u>			<u>4/</u>		
820683 (82-1)	WANSER	83SWELT1	HRW	59.8	59.9	4.6	825	831	<sup>2</sup> Q-FYELD, P-BCRGR	
820684 (82-4)	HD832/ON//BB/3/DRC*2/7C/3/BUKATL	83SWELT14	HRW	59.2	59.3	3.1	805	811	<sup>5</sup> Q-FYELD, P-LVOL	
820685 (82-6)	ALBA/GNS//FN/SON 64	83SWELT15	HRW	58.8	59.9	3.3	660	728	P-BCRGR <sup>8</sup> Q-FYELD, P-LVOL	
820686 (82-8)	ST48/PICH S	83SWELT16	HRW	58.2	59.6	4.4	785	872	<sup>4</sup> P-FYELD&BCRGR	
820687 (82-9)	MILD/3/YMH//RIEB/WA4995/4/SW0...	83SWELT17	HRW	59.2	59.2	4.0	775	775	<sup>5</sup> P-LVOL&BCRGR	
820688 (82-10)	ROM F9-70//CNO S/GALLO	83SWELT18	HRW	62.2	61.0	3.3	835	761	P-LVOL&BCRGR	
820689 (82-11)	55-1744/7C//SUW/ROED	83SWELT19	HRW	59.7	59.6	3.1	715	709	<sup>8</sup> P-FYELD, LVOL&BCRGR	
820690 (82-14)	1150-25/TH//MAG27/3/LOM11	83SWELT28	HRW	59.1	59.0	3.1	740	734	P-BCRGR <sup>8</sup> Q-FYELD, P-LVOL	
820691 (82-15)	CAR853/TORIM	83SWELT27	HRW	60.5	60.4	3.6	735	729	<sup>9</sup> P-FYELD, LVOL&BCRGR	
820692 (82-17)	MARNE DEPREZ/COLOTANA//PICH S	83SWELT20	HRW	62.2	60.8	5.0	925	838	<sup>2</sup>	
820693 (82-18)	ROM.F9-70/ZOPILOTE S	83SWELT21	HRW	61.0	61.2	4.6	770	782	<sup>8</sup> P-LVOL&BCRGR	
820694 (82-22)	ROM F9-70//CNO S/GALLO	83SWELT22	HRW	62.2	61.5	3.2	835	792	<sup>6</sup> P-LVOL&BCRGR	
820695 (82-23)	PROBSTORFER EXTREM/TOB66	83SWELT23	HRW	59.8	60.1	6.9	800	819	<sup>5</sup> Q-BCRGR	
820696 (82-24)	"	83SWELT24	HRW	60.3	60.5	7.8	790	802	<sup>6</sup> Q-BCRGR	
820697 (82-25)	CNO/PF//ASP	83SWELT25	HRW	61.5	60.8	2.5	875	832	<sup>5</sup> Q-BCRGR	
820698 (82-26)	TAST/ANZA	83SWELT26	HRW	58.0	58.4	2.4	850	875	<sup>4</sup> P-FYELD, Q-BCRGR	

1/ Observed Values Corrected to 14% Moisture Basis.5/ Particularly Promising Overall Quality Characteristics.3/ Absorption at 14% Moisture Corrected to 9% Protein.6/ Promising Overall Quality Characteristics.4/ Observed Values Corrected to 9% Protein.

COMMENTS: Only selection 83SWELT20 appears to have acceptable overall HRW quality. See remarks for deficiencies of quality.

Q = Questionable, P = Poor



NURSCO 27

CORVALLIS, OR

W.E. KRONSTAD

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	CODI	CODIC	MTYPE	RMKS
					1/	1/		1/	3/		4/		
820699 (82-1)	HYSLOP	83SWELT1	SWW	62.5	71.1	0.39	83.0	7.4	53.1	8.86			8.80 8L
820700 (82-2)	STEPHENS	83SWELT2	SWW	61.0	72.1	0.37	85.0	7.4	52.6	9.02			8.96 8L
820701 (82-3)	DAWS	83SWELT3	SWW	62.4	71.0	0.37	83.6	8.3	52.5	8.57			8.61 5L
820702 (82-4)	FARO	83SWELT4	CLUB	61.8	73.0	0.38	87.7	7.2	50.2	8.89			8.83 2L
820703 (82-5)	JACMAR	83SWELT5	CLUB	61.3	72.4	0.40	84.2	8.3	49.6	9.24			9.26 2L
820704 (82-6)	HILL 81	83SWELT6	SWW	63.6	74.0	0.37	88.4	8.5	51.3	8.71			8.77 3L
820705 (82-8)	NORTENO M067/6720//NUG	6/ 83SWELT9	SWW	62.4	71.6	0.37	84.2	8.5	50.3	8.91			8.97 5L
820706 (82-9)	65-116-MBW//63-189-66-7/BEZO	6/ 83SWELT10	SWW	62.4	71.7	0.37	84.0	8.1	51.2	8.67			8.69 2L
820707 (82-10)	65-116-MBW//AURORA/YMH	5/ 83SWELT11	SWW	60.0	73.1	0.37	85.9	7.5	50.3	9.01			Good Milling
820708 (82-11)	1523.DRC.DWF/INS	83SWELT12	SWW	61.4	70.4	0.38	82.0	7.6	51.4	9.11			8.96 2L Q-FYELD
820709 (82-12)	MILDRESS/3/YMH//RIEB/WA4995	5/ 83SWELT13	SWW	62.1	74.5	0.38	86.9	7.8	50.5	9.11			9.09 2L E-FYELD
820710 (82-17)	7C/CNO//CAL/3/YMH	83SWELT14	SWW	62.1	70.0	0.37	80.6	8.1	50.3	8.99			9.00 2L Q-FYELD
820711 (82-19)	61-1228-6-706//69-148/NUG	5/ 83SWELT15	SWW	63.2	74.3	0.33	89.5	8.0	50.6	9.02			9.02 2L E-FYELD
820712 (82-20)	58-182/DRC//65-116/MBW2	6/ 83SWELT16	SWW	61.1	71.8	0.34	86.0	7.4	52.3	9.10			9.03 4L
820713 (82-21)	NORTENO M-67/6720//6720-68-5/36/	83SWELT17	SWW	60.1	70.9	0.37	82.8	8.4	51.5	8.65			8.69 8L
820714 (82-23)	1523/DRC.DWF//FIEB,F1/3/WA5989	6/ 83SWELT18	SWW	62.7	70.8	0.37	82.9	8.7	51.9	8.99			9.06 3L
820715 (82-25)	KVZ/3/HD/ON//BB/4/YPOPF/3/RIEB	83SWELT19	SWW	60.9	64.9	0.39	70.8	8.2	50.5	8.91			8.93 8L P-FYELD
820716 (82-27)	YMH/BOQUIN,F1//MARIS BACON	83SWELT20	SWW	62.5	68.5	0.37	77.9	8.8	52.1	8.82			8.91 2L P-FYELD
820717 (82-29)	YMH DWF	6/ 83SWELT21	SWW	59.1	71.1	0.39	81.6	8.5	52.2	8.81			8.87 4L

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 8% Protein.

4/ Observed Values Corrected to 8% Protein.

5/ Particularly Promising Overall Quality Characteristics.

6/ Promising Overall Quality Characteristics.

COMMENTS: Several of these selections have good overall promise as high quality SWW wheats. Those not footnoted as promising have poor flour yield.

Q = Questionable, E = Excellent, P = Poor



NURSCO 28

ABD, KAL, R. S., MOR, PEN

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE	FABS	FPEAK
						1/		1/	3/			
820718 MCKAY		C1017903	HRS	61.6	71.0	0.41	83.5	11.0	61.0	3H	58.5	6.0
820719 BANNOCK/738-274-1		5/ UT541774	HRS	61.1	71.2	0.38	85.6	11.1	61.9	3H	63.2	4.7
820720 BANNOCK/738-274-1		6/ UT541777	HRS	61.2	70.7	0.40	84.5	11.0	61.3	3H	63.0	4.7
820721 SO.DAKOTA HESSIAN FLY RES.SEL.		6/ SD8015	HRS	62.2	71.1	0.43	83.1	12.6	64.2	4H	65.7	6.6
820722 BORAH/3/MRN//PJS1B/G855.ETC		5/ ID0238	HRS	61.4	72.5	0.41	86.5	11.8	63.9	4H	66.2	7.4
820723 TZPP/AN3//B61-136AB SEL.ETC		ID0247	HRS	61.6	71.3	0.42	84.2	11.3	62.5	4H	66.3	6.7
820724 UTAH W498-259/PROSPUR		5/ UT0209	HRS	60.2	72.0	0.44	83.9	11.4	62.7	5H	59.9	10.0
820725 UTAH W498-165/PEAK 72		6/ UT0391	HRS	62.1	71.0	0.42	83.7	12.6	63.7	5H	62.1	10.1
820726 UTAH W498-165/PRODAX		UT1655	HRS	59.0	70.3	0.51	77.8	12.0	61.3	3H	62.1	5.4
820727 UTAH W498-165/BORAH		UT2746	HRS	60.8	69.6	0.42	81.1	12.1	63.0	3H	64.5	4.8

1/ Observed Values Corrected to 14% Moisture Basis.3/ Absorption at 14% Moisture Corrected to 12% Protein.4/ Observed Values Corrected to 12% Protein.5/ Particularly Promising Overall Quality Characteristics.6/ Promising Overall Quality Characteristics.





NURSCO 28

ABD, KAL, R. S., MOR, PEN

LABNUM	VARIETY	IDNO	CLASS	FSTAB	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR	RMKS
						3/			4/		
820718	MCKAY										
820719	BANNOCK/738-274-1	C1017903	HRS	4.5	61.2	62.2	3.3	1075	1137	2	
820720	BANNOCK/738-274-1	UT541774	HRS	5.2	63.2	64.1	2.7	1070	1126	2	
820721	SO. DAKOTA HESSIAN FLY RES. SEL.	UT541777	HRS	5.8	62.5	63.5	3.0	1035	1097	2	
820722	BORAH/3/MRN//PJSIB/GB55. ETC	SD8015	HRS	7.6	68.5	67.9	3.9	1110	1073	2	
		ID0238	HRS	8.3	65.9	66.1	3.9	1065	1077	1	
820723	TZPP/AN3//B61-136AB SEL. ETC	ID0247	HRS	4.8	65.5	66.2	3.8	1000	1043	3	Q-LVOL&BCRGR
820724	UTAH W498-259/PROSPUR	UT0209	HRS	15.3	64.3	64.9	5.8	1085	1122	2	
820725	UTAH W498-165/PEAK 72	UT0391	HRS	13.5	66.5	65.9	4.3	1115	1078	2	
820726	UTAH W498-165/PRODAX	UT1655	HRS	6.0	63.5	63.5	3.1	1020	1020	4	Q-MSCOR, LVOL, &BCRGR
820727	UTAH W498-165/BORAH	UT2746	HRS	4.9	64.3	64.2	2.3	1103	1097	4	Q-MSCOR, LVOL, &BCRGR

## COMMENTS:

Equal amounts of seed was composited from nurseries grown at Aberdeen, ID, Kalispell, MT, Moro and Pendleton, OR, and Royal Slope, WA. Those entries which have acceptable and promising milling and baking properties are noted with footnotes (adjacent to ID No.). Those which were poor and not acceptable have their deficiencies noted under the Remarks column.



NURSCO 29

ABD, KAL, R. S., MOR, PEN

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE	BABS	BABSC	MTIME
						1/	1/	1/	3/			3/	
820728	POTAM 70/WA6021. K7-905243	6/ WA6826	SWS	60.1	72.4	0.44	81.6	10.1	56.2	2M			
820729	POTAM 70/WA6021. K7-905208	WA6830	SWS	59.4	69.5	0.44	76.6	9.9	55.6	2M			
820730	POTAM 70/WA6021. K7-905209	WA6831	SWS	59.5	69.5	0.43	76.2	10.1	54.5	2M			
820731	FEDERATION	C1004734	SWS	59.2	67.0	0.42	73.7	10.7	55.7	2M			
820732	OWENS	C1017904	SWS	61.7	68.7	0.40	78.0	9.7	55.7	2M			
820733	WAVERLY	C1017911	SWS	59.8	71.2	0.44	79.7	10.4	55.8	2M			
820734	HYSLOP/FIELDER	ID0172	SWS	60.4	69.7	0.45	76.8	10.2	54.9	2M			
820735	ID0046/7/ID0045/6/2*A6596S-A-21-1/5/2*06/	ID0190	SWS	61.4	70.1	0.42	79.0	9.9	55.9	2M			
820736	FIELDER/5/BB11/4/7*SFL/3/AS/FR//A63167S-	ID0224	SRS	60.0	70.0	0.43	78.4	9.7	55.1	1M			
820737	ID0118/OASIS/3/5*TWIN/ID0021//PI777196/6/	ID0232	SWS	58.7	70.5	0.46	76.6	10.5	53.6	1M			
820738	FBR/5/BB11/4/7*SFL/3/AS/FR//A63167S-A-1-	ID0233	SWS	60.8	71.1	0.43	79.4	9.9	55.0	2M			
820739	FBR/5/BB11/4/7*SFL/3/AS/FR//A63167S-A-1-	ID0234	SWS	60.5	70.5	0.42	79.0	10.0	56.0	2M			
820740	FBR/5/BB11/4/7*SFL/3/AS/FR//A63167S-A-1-	ID0235	SRS	60.6	70.7	0.43	79.1	9.9	54.8	1M			
820741	FBR/5/BB11/4/7*SFL/3/AS/FR//A63167S-A-1-	ID0236	SWS	61.6	72.2	0.42	82.5	10.0	54.0	1M			
820742	ID67*2/BB 5'RESEL.A73341S-23-4	ID0227	SWS	59.0	69.6	0.44	76.7	9.4	52.6	1M			
820743	BB11/4/*SFL/3/AS/FR//A63167S-A-1-50-45-5	ID0246	SWS	59.7	69.7	0.44	76.9	10.2	54.7	2M			
820744	POTAM 70/WA6021. K7905130	WA6916	SWS	61.5	69.1	0.45	74.8	10.5	54.8	2M	54.5	54.0	2.0
820745	POTAM 70/WA6021. K7905130	WA6917	SWS	61.3	72.0	0.46	78.2	10.6	54.5	3M	53.3	52.7	2.3
820746	POTAM 70/WA6021. K7905130	WA6918	SWS	61.2	70.2	0.45	76.3	10.4	54.7	3M	54.3	53.9	2.3
820747	POTAM 70/WA6021. K7905130	WA6919	SWS	61.2	69.0	0.45	75.5	10.5	54.8	3M	53.5	53.0	2.2
820748	POTAM 70/WA6021. K7905130	WA6920	SWS	61.2	68.5	0.45	74.0	10.3	54.1	3M	52.6	52.3	2.5
820749	LIFN*2-N1220/POTAM 70	WA6921	SWS	60.7	70.1	0.49	73.6	10.7	54.9	3M			

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 10% Protein.

4/ Observed Values Corrected to 10% Protein.

5/ Particularly Promising Overall Quality Characteristics.

6/ Promising Overall Quality Characteristics.



NURSCO 29

ABD, KAL, R. S., MOR, PEN

LABNUM	VARIETY	IDNO	CLASS	LVOL	LVOLC	BCRGR	CODI	CODIC	CAVOL	SCSOR	WTIN	NOSCO	RMKS
					4/			4/					
820728	POTAM 70/WA6021.K7-905243	WA6826	SWS				8.89	8.90	1251	75.0	365	66	Q-FYELD&MSCOR
820729	POTAM 70/WA6021.K7-905208	WA6830	SWS				8.80	8.79	1211	76.0	378	67	Q-FYELD&MSCOR
820730	POTAM 70/WA6021.K7-905209	WA6831	SWS				8.93	8.94	1251	77.0	383	73	Q-FYELD&MSCOR
820731	FEDERATION	CI004734	SWS				8.76	8.83	1281	78.0	374	70	
820732	OWENS	CI017904	SWS				9.02	8.99	1236	75.0	388	80	
820733	WAVERLY	CI017911	SWS				8.81	8.86	1336	80.0	368	72	
820734	HYSLOP/FIELDER	ID0172	SWS				8.81	8.83	1301	77.0	379	68	Q-FYELD&MSCOR
820735	ID0046/7/ID0045/6/2*A6596S-A-21-1/5/2*0	ID0190	SWS				9.18	9.17	1311	78.0	387	74	
820736	FIELDER/5/BB11/4/7*SFL/3/AS/FR//A63167S-	ID0224	SRS				8.99	8.96	1306	76.0	400	73	Red Seed
820737	ID0118/OASIS/3/5*TWIN/ID0021//P1777196/	ID0232	SWS				9.04	9.10	1266	74.0	389	70	
820738	FBR/5/BB11/4/7*SFL/3/AS/FR//A63167S-A-1-	ID0233	SWS				8.86	8.85	1376	83.0	384	75	E-CAVOL&SCSOR
820739	FBR/5/BB11/4/7*SFL/3/AS/FR//A63167S-A-1-	ID0234	SWS				8.92	8.92	1296	77.0	376	73	
820740	FBR/5/BB11/4/7*SFL/3/AS/FR//A63167S-A-1-	ID0235	SRS				9.07	9.06	1301	79.0	398	69	Red seed coat +
820741	FBR/5/BB11/4/7*SFL/3/AS/FR//A63167S-A-1-	ID0236	SWS				8.96	8.96	1286	77.0	391	74	P-NOSCO
820742	ID67*2/BB5'RESEL.A73341S-23-4	ID0227	SWS				9.07	9.01	1331	80.0	392	70	Q-FYELD&MSCOR
820743	BB11/4/*SFL/3/AS/FR//A63167S-A-1-50-45-5	ID0246	SWS				8.99	9.02	1336	80.0	388	73	Q-FYELD&MSCOR
820744	POTAM 70/WA6021.K7905130	WA6916	SWS	1023	993	4	8.94	9.00	1216	71.0	403	72	Q-FYELD&MSCOR
820745	POTAM 70/WA6021.K7905130	WA6917	SWS	1023	987	4	8.77	8.83	1331	81.0	404	74	
820746	POTAM 70/WA6021.K7905130	WA6918	SWS	1043	1019	5	8.86	8.90	1326	78.0	391	73	Q-MSCOR
820747	POTAM 70/WA6021.K7905130	WA6919	SWS	1023	993	5	8.86	8.92	1226	73.0	385	74	Q-FYELD&MSCOR
820748	POTAM 70/WA6021.K7905130	WA6920	SWS	1020	1002	4	8.91	8.94	1261	75.0	384	74	Q-FYELD&MSCOR
820749	LIFN*2-N1220/POTAM 70	WA6921	SWS				8.61	8.69	1276	74.0	388	66	P-MSCOR

COMMENTS: Equal amounts of seed was composited from nurseries grown at Aberdeen, ID, Kalispell, MT, Royal Slope, WA, and Moro, and Pendleton, OR. Owens and Waverly were used as check varieties. Milling quality was poor for the entire group including the checks. The following selections, WA6830, WA6831, WA6916, WA6918-6921, ID0172, ID0227, and ID0246 were not equal to Owens (the poorer of the two checks) in milling performance and were scored questionable to poor in milling. ID0224 and ID0235 have red seed coats which detracted from noodle color. WA6917 through 6920 have stronger dough mixing properties but failed to give satisfactory crumb in the bread tests.

E = Excellent Q = Questionable P = Poor





NURSCO 30

CORVALLIS, OR

W.E. KRONSTAD

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	MTYPE
820750 (82-1)	WANSER	83HRAYP 1	HRW	64.4	72.4	0.36	89.1	8.3	59.2	8M
820751 (82-2)	HYS-703/4/SN/HN4//REX/3/EDCH/MEX	83HRAYP 4	HRW	65.2	73.4	0.40	88.1	7.9	54.5	4L
820752 (82-9)	TJB788-1039/HYS, F1//LKF	83HRAYP 5	HRW	64.0	70.2	0.46	81.5	7.0	59.5	6L
820753 (82-19)	LFN/YGAF//FLK, F1/3/ROME75-51	83HRAYP 6	HRW	63.2	70.3	0.45	82.5	7.2	59.4	6L
820754 (82-22)	STP/5/T0B/BMAN//BB/3/CDL/4/SX...	83HRAYP 7	HRW	64.4	71.0	0.44	83.4	8.8	58.7	7M
820755 (82-24)	LOM/SAPSUCKER S	83HRAYP 8	HRW	62.4	71.2	0.44	83.7	7.5	58.9	6L
820756 (82-25)	YG8994/ALMA//TI-RESEL	5/83HRAYP 9	HRW	62.4	72.9	0.40	87.5	8.7	58.2	4L
820757 (82-29)	SAGE/YR	83HRAYP 10	HRW	63.6	70.1	0.40	84.8	7.6	59.3	6L
820758 (82-44)	CNO/CHR//ON/5/53-388/3/AN64...	6/83HRAYP 11	HRW	61.6	73.5	0.44	86.2	8.8	58.1	8M
820759 (82-45)	ND/P101//BUHO	83HRAYP 12	HRW	62.4	71.4	0.48	81.9	8.7	59.1	7M
820760 (82-46)	"	83HRAYP 13	HRW	63.2	72.5	0.46	84.2	8.6	59.2	7M
820761 (82-52)	LOM/SAPSUCKER S	83HRAYP 14	HRW	62.8	68.7	0.44	81.3	7.7	61.2	8L
820762 (82-53)	"	83HRAYP 15	HRW	63.2	69.1	0.44	81.8	7.9	61.1	8L
820763 (82-56)	NA160/HN VII//SALAMANCA	83HRAYP 16	HRW	62.4	71.1	0.46	82.8	8.0	58.9	7L
820764 (82-57)	TENOR/JUBILAR*2//BENNO. 3/YR	83HRAYP 17	HRW	62.4	70.4	0.44	82.7	8.0	58.8	8L
820765 (82-59)	KOL/PMF/3/7C//CNO/CAL/4/CLEO	6/83HRAYP 18	HRW	63.2	70.8	0.42	84.6	9.0	59.7	7M
820766 (82-62)	"	83HRAYP 19	HRW	64.4	71.8	0.42	85.3	8.6	59.2	4L
820767 (82-67)	OFN DW/LR//NI/4/MY54/NIOB//...	6/83HRAYP 20	HRW	64.0	72.6	0.40	87.5	8.4	59.4	4L
820768 (82-71)	RBS/CONDOR	83HRAYP 21	HRW	62.0	70.1	0.37	86.1	9.8	58.6	4L
820769 (82-75)	KKZ/PI	5/83HRAYP 22	HRW	62.8	72.1	0.41	86.5	8.9	60.3	8M
820770 (82-81)	PMF/CNO S/GLL	6/83HRAYP 23	HRW	64.0	70.2	0.36	86.8	8.4	60.4	6L
820771 (82-83)	CAR 853/TORIM	83HRAYP 24	HRW	63.6	70.5	0.40	85.3	8.1	61.1	6L
820772 (82-84)	ND/VG9144//TORIM	83HRAYP 25	HRW	62.8	70.8	0.39	85.8	8.1	61.3	6L
820773 (82-85)	OFN/4/YT54/3/NIOB/LR//MFO/5/...	83HRAYP 26	HRW	64.0	71.4	0.40	86.3	8.1	60.9	8L
820774 (82-86)	"	83HRAYP 27	HRW	63.2	72.1	0.39	87.1	8.0	61.2	8L
820775 (82-87)	CNA/JCAM	83HRAYP 28	HRW	60.8	71.8	0.39	86.7	7.2	61.3	8L
820776 (82-88)	"	6/83HRAYP 29	HRW	62.4	70.9	0.39	86.0	7.8	60.5	3L
820777 (82-89)	HUAC//TJB/370-491	83HRAYP 30	HRW	62.0	70.2	0.38	86.1	8.4	59.5	3M

1/ Observed Values Corrected to 14% Moisture Basis. 5/ Particularly Promising Overall Quality Characteristics.  
3/ Absorption at 14% Moisture Corrected to 8% Protein. 6/ Promising Overall Quality Characteristics.  
4/ Observed Values Corrected to 8% Protein.



NURSCO 30

CORVALLIS, OR

W.E. KRONSTAD

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC 3/	MTIME	LVOL	LVOLC 4/	BCRGR	RMKS
820750	(82-1) WANSER	83HRAYP 1	HRW	62.7	62.4	6.0	755	736	4	9VP-LVOL,BCRGR
820751	(82-2) HYS-703/4/SN/HN4//REX/3/EDCH/MEX	83HRAYP 4	HRW	55.6	55.7	2.8	585	591	9VP-LVOL,BCRGR	
820752	(82-9) TJB788-1039/HYS,F1//LK	83HRAYP 5	HRW	63.7	64.7	7.8	500	562	9VP-LVOL,BCRGR	
820753	(82-19) LFN/YGAF//FLK,F1/3/ROME75-51	83HRAYP 6	HRW	63.8	64.6	7.0	550	600	9VP-LVOL,BCRGR	
820754	(82-22) STP/5/TOB/BMAN//BB/3/CDL/4/SX...	83HRAYP 7	HRW	64.7	63.9	6.3	705	655	7VP-LVOL,BCRGR	
820755	(82-24) LOM/SAPSUCKER S	83HRAYP 8	HRW	62.6	63.1	6.0	545	576	9VP-LVOL,BCRGR	
820756	(82-25) YG8994/ALMA//TI-RESEL	83HRAYP 9	HRW	62.1	61.4	4.5	755	712	2	
820757	(82-29) SAGE/YR	83HRAYP 10	HRW	62.1	62.5	4.6	700	725	6P-BCRGR	
820758	(82-44) CNO/CHR//ON/5/53-388/3/AN64...	83HRAYP 11	HRW	61.6	60.8	3.6	800	750	4Q-BCRGR	
820759	(82-45) ND/P101//BUHO	83HRAYP 12	HRW	60.5	59.8	2.9	780	737	4Q-FYELD,BCRGR	
820760	(82-46) "	83HRAYP 13	HRW	60.0	59.4	3.0	790	753	5P-BCRGR	
820761	(82-52) LOM/SAPSUCKER S	83HRAYP 14	HRW	66.6	66.9	5.7	645	664	9VP-LVOL,BCRGR	
820762	(82-53) "	83HRAYP 15	HRW	66.2	66.3	8.7	605	611	9VP-LVOL,BCRGR	
820763	(82-56) NA160/HN V11//SALAMANCA	83HRAYP 16	HRW	60.1	60.1	4.0	760	760	8VP-LVOL,BCRGR	
820764	(82-57) TENOR/JUBILAR*2//BENNO.3/YR	83HRAYP 17	HRW	61.0	61.0	4.3	585	585	9VP-LVOL,BCRGR	
820765	(82-59) KOL/PMF/3/7C//CNO/CAL/4/CLEO	83HRAYP 18	HRW	62.9	61.9	3.5	735	673	2	
820766	(82-62) "	83HRAYP 19	HRW	62.0	61.4	3.0	645	608	9P-LVOL,BCRGR	
820767	(82-67) OFN DW/LR//N1/4/MY54/N1OB//...	83HRAYP 20	HRW	60.5	60.1	3.5	820	795	3	
820768	(82-71) RBS/CONDOR	83HRAYP 21	HRW	61.6	59.8	3.0	800	688	8P-LVOL,BCRGR	
820769	(82-75) KKZ/PI	83HRAYP 22	HRW	64.4	63.5	4.9	855	799	2	
820770	(82-81) PMF/CNO S/GLL	83HRAYP 23	HRW	66.0	65.6	5.6	825	800	4Q-FYELD,BCRGR	
820771	(82-83) CAR 853/TORIM	83HRAYP 24	HRW	65.4	65.3	6.2	710	704	8P-BCRGR	
820772	(82-84) ND/VG9144//TORIM	83HRAYP 25	HRW	65.6	65.5	5.1	735	729	8P-BCRGR	
820773	(82-85) OFN/4/YT54/3/N1OB/LR//MFO/5/...	83HRAYP 26	HRW	63.2	63.1	5.1	800	794	7P-BCRGR	
820774	(82-86) "	83HRAYP 27	HRW	63.4	63.4	7.9	775	775	7P-BCRGR	
820775	(82-87) CNA/JCAM	83HRAYP 28	HRW	61.7	62.5	4.3	730	780	8P-BCRGR	
820776	(82-88) "	83HRAYP 29	HRW	61.5	61.7	2.3	810	822	3	
820777	(82-89) HUAC//TJB/370-491	83HRAYP 30	HRW	65.1	64.7	3.0	500	475	9VP-LVOL,BCRGR	

COMMENTS: Proteins were low for good evaluation of baking properties. Wanser was atypical in bread crumb grain(BCRGR) and all experimental selections were judged accordingly.

VP = Very Poor; Q = Questionable; P = Poor



NURSCO 31

CORVALLIS, OR

W.E. KRONSTAD

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	CODI	CODIC	MTYPE	RMKS
						<u>1/</u>		<u>1/</u>	<u>3/</u>		<u>4/</u>		
820778	(82-11) YAMHILL	83SWAYP 3	SWW	58.6	73.0	0.45	85.5	6.8	51.5	9.22		9.09	1L
820779	(82-10) STEPHENS	83SWAYP 1	SWW	61.4	72.7	0.43	86.1	8.2	50.0	9.21		9.23	2L
820780	(82-12) DAWS	83SWAYP 2	SWW	62.0	71.8	0.43	85.4	7.3	52.0	8.96		8.88	5L
820781	(82-3) YMH/SPN SSD 800004	6/83SWAYP 68	SWW	60.4	71.6	0.40	86.6	7.2	52.1	8.93		8.84	5L
820782	(82-7) YMH/SPN SSD 800027	5/83SWAYP 69	SWW	61.6	74.7	0.42	89.4	8.1	51.7	9.29		9.30	2L
820783	(82-15) YMH/SPN SSD 800039	5/83SWAYP 70	SWW	58.4	75.5	0.40	91.5	6.8	51.1	9.41		9.28	2L
820784	(82-28) YMH/SPN SSD 800093	5/83SWAYP 71	SWW	62.6	74.1	0.37	92.1	7.1	53.3	9.36		9.26	2L
820785	(82-34) YMH/SPN SSD 800110	6/83SWAYP 72	SWW	59.6	71.4	0.43	84.9	6.9	51.0	9.29		9.17	1L
820786	(82-41) YMH/SPN SSD 800168	83SWAYP 73	SWW	62.0	70.6	0.41	85.1	9.1	53.3	9.11		9.23	2L S. low FYELD
820787	(82-43) YMH/SPN SSD 800174	5/83SWAYP 74	SWW	61.2	74.5	0.40	90.4	8.0	51.4	9.31		9.31	2L
820788	(82-44) YMH/SPN SSD 800179	5/83SWAYP 75	SWW	61.2	74.5	0.42	89.3	8.9	51.8	9.18		9.28	3L
820789	(82-45) YMH/SPN SSD 800186	6/83SWAYP 76	SWW	61.2	72.6	0.40	88.3	7.1	51.8	8.94		8.84	8L
820790	(82-46) YMH/SPN SSD 800192	6/83SWAYP 77	SWW	61.8	71.5	0.40	86.9	8.6	51.7	9.06		9.12	2L
820791	(82-55) YMH/DAWS SSD 800219	5/83SWAYP 78	SWW	61.8	72.7	0.39	88.7	8.5	50.8	9.31		9.37	2M
820792	(82-74) YMH/DAWS SSD 800355	83SWAYP 79	SWW	61.6	70.4	0.41	84.9	7.7	53.1	9.19		9.15	5L S. low FYELD
820793	(82-75) YMH/DAWS SSD 800397	6/83SWAYP 80	SWW	58.8	73.3	0.42	87.6	6.8	51.1	9.20		9.07	5L
820794	(82-76) YMH/DAWS SSD 800417	5/83SWAYP 81	SWW	59.6	74.2	0.40	89.9	6.6	51.0	9.48		9.33	8L
820795	(82-78) YMH/LUKE SSD 800454	6/83SWAYP 82	SWW	63.6	71.8	0.36	89.6	7.8	53.2	9.01		8.98	3L
820796	(82-79) YMH/LUKE SSD 800455	5/83SWAYP 83	SWW	63.6	74.1	0.39	90.4	8.2	52.6	9.16		9.18	3L
820797	(82-85) YMH/LUKE SSD 800511	5/83SWAYP 84	SWW	59.6	73.5	0.43	87.5	8.7	52.2	9.06		9.14	3L
820798	(82-87) YMH/LUKE SSD 800533	5/83SWAYP 85	SWW	63.2	72.5	0.34	91.6	8.4	52.0	9.21		9.25	2L

1/ Observed Values Corrected to 14% Moisture Basis.3/ Absorption at 14% Moisture Corrected to 8% Protein.4/ Observed Values Corrected to 8% Protein.

COMMENTS: Several among this group of wheats have excellent overall quality, particularly outstanding in milling characteristics.





NURSCO 32

CORVALLIS, OR

W.E. KRONSTAD

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE	BABS
						<u>1/</u>		<u>1/</u>	<u>3/</u>		
820799 (82-1) YAMHILL		83SWAYP 3	SWW	60.2	72.6	0.40	87.8	7.6	54.9	4L	53.2
820800 (82-10) STEPHENS		83SWAYP 1	SWW	62.4	73.7	0.39	89.8	8.1	53.8	3L	51.6
820801 (82-7) HYS/CERCO		83SWAYP 86	HWW	62.2	72.2	0.45	84.5	7.9	57.5	6L	60.6
820802 (82-8) HYS/CERCO		83SWAYP 87	HWW	60.2	71.7	0.48	82.1	7.9	57.5	6L	60.6
820803 (82-9) HYS/CERCO		83SWAYP 88	HWW	64.0	74.0	0.41	88.1	7.6	57.4	6L	60.2
820804 (82-23) YMH/63-112-66-2//CERCO		83SWAYP 89	HWW	62.8	73.5	0.44	86.2	7.8	57.7	4L	59.2
820805 (82-26) TJB 240-1834/YMH		83SWAYP 90	HWW	62.4	74.5	0.42	88.1	7.7	57.9	6L	59.8
820806 (82-32) TJB 259-83/3/CDD/P101//DRC		83SWAYP 25	HWW	62.8	74.7	0.43	87.8	7.4	56.9	4L	56.5

LABNUM	VARIETY	IDNO	CLASS	BABSC	MTIME	LVOL	LVOLC	BCRGR	CODI	CODIC	RMKS
				<u>3/</u>			<u>4/</u>				
820799 (82-1) YAMHILL		83SWAYP 3	SWW	53.6	3.3	585	609	9	9.29	9.24	
820800 (82-10) STEPHENS		83SWAYP 1	SWW	51.5	2.1	675	669	9	9.25	9.26	
820801 (82-7) HYS/CERCO		83SWAYP 86	HWW	60.7	6.3	600	606	9	8.39	8.38VP-BCRGR&CODI	
820802 (82-8) HYS/CERCO		83SWAYP 87	HWW	60.7	6.2	610	616	9	8.19	8.18VP-BCRGR&CODI	
820803 (82-9) HYS/CERCO		83SWAYP 88	HWW	60.6	6.2	620	645	9	8.55	8.52VP-BCRGR&CODI	
820804 (82-23) YMH/63-112-66-2//CERCO		83SWAYP 89	HWW	59.4	5.0	660	672	9	8.44	8.42VP-BCRGR&CODI	
820805 (82-26) TJB 240-1834/YMH		83SWAYP 90	HWW	60.1	4.1	680	699	9	8.40	8.38VP-BCRGR&CODI	
820806 (82-32) TJB 259-83/3/CDD/P101//DRC		83SWAYP 25	HWW	57.1	3.4	615	652	9	8.57	8.53VP-BCRGR&CODI	

1/ Observed Values Corrected to 14% Moisture Basis.5/ Particularly Promising Overall Quality Characteristics.3/ Absorption at 14% Moisture Corrected to 8% Protein.6/ Promising Overall Quality Characteristics.4/ Observed Values Corrected to 8% Protein.

None of these hard white selections are suited for bread or pastry products. Milling properties are excellent.

VP = Very Poor



NURSCO 33

MORO, OR

C.R. ROHDE

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE	BABS
						<u>1/</u>		<u>1/</u>	<u>4/</u>		
820807	SEL. 101/CAMA//1-372/CAMA.K-2	OR8234	HRW	62.5	73.6	0.42	87.5	9.8	59.0	2M	60.0
820808	STEPHENS/CAMA//OR765.K-312	<u>6/</u> OR8239	SRW	63.0	73.2	0.44	86.2	9.3	52.0	1M	
820809	1-607/CAMA//OR7664.K-146	<u>6/</u> OR825	SRW	60.9	72.2	0.41	87.0	9.2	55.6	6L	
820810	1-607/CAMA//SENCOR CLUB.K-19	<u>6/</u> OR8218	SRW	63.1	74.1	0.43	87.8	8.6	54.3	2L	
820811	REW/CAMA//OR74131.K-271	<u>6/</u> OR8233	SRW	63.8	75.2	0.44	88.8	8.6	53.2	1M	
820812	REW 2*/CAMA.K-269	<u>6/</u> OR8232	SRW	63.0	72.2	0.44	84.7	9.5	51.2	1M	
820813	DAWS	17419	SRW	62.5	71.1	0.45	83.1	9.1	52.3	2M	
820814	67-237-53H/178383.M76-324//OR7464.K181	OR8213	HRW	61.7	72.5	0.41	86.7	8.9	59.7	7M	63.3
820815	DAWS/SEL. 72-1250(M76-454)PW77-7.K-342	OR8242	SRW	61.4	70.7	0.47	80.9	9.1	50.6	2M	
820816	YAYLA/YMH/RIEB/YMH/3/REW.K-364	<u>6/</u> OR8244	SRW	65.5	72.7	0.46	84.5	9.2	51.2	2M	
820817	1-607/CAMA//OWW69-028-3W5.K-186	<u>6/</u> OR8216	SRW	61.2	72.7	0.43	86.1	9.6	52.1	5M	
820818	1-607/CAMA//OWW69-028-3W5.K-135	<u>6/</u> OR822	SRW	60.6	72.2	0.44	85.0	9.4	52.4	3M	
820819	1-607/CAMA//OR7464.K-145	OR824	SRW	61.2	72.4	0.45	84.4	9.4	54.2	7M	
820820	STEPHENS/CAMA//DAWS.K-177	<u>6/</u> OR8212	HRW	63.0	72.9	0.40	87.5	8.5	54.2	2M	52.9
820821	OR7142/CAMA//FARO.K-160	<u>6/</u> OR828	SRW	63.4	74.2	0.44	87.4	9.5	49.3	1M	
820822	CERCO/ROMANIAN//STEPHENS.K-2	<u>6/</u> OR8224	SRW	60.9	72.3	0.44	84.8	8.9	49.3	3M	
820823	1-607/CAMA//OWW69-028-3W5.K-136	<u>6/</u> OR826	SRW	62.8	71.3	0.44	83.9	9.9	50.2	3M	
820824	STEPHENS	17596	SRW	61.2	72.8	0.47	84.0	9.2	51.0	1M	
820825	STEPHENS/CAMA//OR765.K-300	OR8238	HRW	63.5	73.3	0.43	86.3	9.5	52.6	2M	55.8
820826	67-237-53H/178383.M76-324//OR7464.K-182	OR8214	HRW	60.7	72.2	0.40	86.7	9.6	56.9	3M	61.7
820827	1-607/CAMA//OWW69-028-3W5.K-144	<u>6/</u> OR823	SRW	61.2	71.2	0.44	83.9	10.5	51.8	2M	
820828	1-607/CAMA//OWW69-028-3W5.K-184	OR8215	HRW	61.6	74.5	0.41	88.5	9.3	55.0	4M	59.5
820829	STEPHENS/CAMA//ID75537.K-228	OR8223	HRW	60.0	71.5	0.41	85.8	8.6	53.0	2M	55.8
820830	SEL. 101/CAMA//1-372/CAMA.K-2	OR8229	HRW	63.3	73.8	0.38	89.6	10.4	54.2	3M	61.8
820831	STEPHENS/P.1.173438(M76-479)PW77-16.K-36	<u>5/</u> OR8245	SRW	61.0	74.4	0.47	86.0	9.2	49.5	1M	

1/ Observed Values Corrected to 14% Moisture Basis.

5/ Particularly Promising Overall Quality Characteristics.

3/ Absorption at 14% Moisture Corrected to 9% Protein.

6/ Promising Overall Quality Characteristics.

4/ Observed Values Corrected to 9% Protein.

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NURSCO 33

MORO, OR

C.R. ROHDE

LABNUM	VARIETY	IDNO	CLASS	BABSC	MTIME	LVOL	LVOLC	BCRGR	CODI	CODIC	RMKS
				3/			4/			4/	
820807	SEL.101/CAMA//I-372/CAMA.K-2	OR8234	HRW	59.2	1.3	870	820	6	8.64	8.70 <sup>P</sup> -M <sup>T</sup> IME,BCRGR	
820808	STEPHENS/CAMA//OR765.K-312	OR8239	SRW						9.06	9.10	
820809	I-607/CAMA//OR7664.K-146	OR825	SRW						8.82	8.85	
820810	I-607/CAMA//SENCOR CLUB.K-19	OR8218	SRW						8.89	8.84	
820811	REW/CAMA//OR74131.K-271	OR8233	SRW						8.85	8.81	
820812	REW 2*/CAMA.K-269	OR8232	SRW						8.71	8.77	
820813	DAWS	17419	SRW						8.86	8.87	
820814	67-237-53H/178383.M76-324//OR7464.K181	OR8213	HRW	63.4	4.0	750	756	8	8.29	8.28 <sup>P</sup> -BCRGR	
820815	DAWS/SEL.72-1250(M76-454)PW77-7.K-342	OR8242	SRW						8.76	8.77 <sup>Q</sup> -F <sup>Y</sup> ELD	
820816	YAYLA/YMH/RIEB/YMH/3/REW.K-364	OR8244	SRW						8.90	8.92	
820817	I-607/CAMA//OWW69-028-3W5.K-186	OR8216	SRW						9.14	9.20	
820818	I-607/CAMA//OWW69-028-3W5.K-135	OR822	SRW						8.96	9.01	
820819	I-607/CAMA//OR7464.K-145	OR824	SRW						8.51	8.56 <sup>Q</sup> -C <sup>O</sup> DI	
820820	STEPHENS/CAMA//DAWS.K-177	OR8212	HRW	53.4	3.4	630	661	9	8.47	8.43 <sup>VP</sup> -L <sup>V</sup> OL,BCRGR	
820821	OR7142/CAMA//FARO.K-160	OR828	SRW						8.65	8.70	
820822	CERCO/ROMANIAN//STEPHENS.K-2	OR8224	SRW						8.87	8.86	
820823	I-607/CAMA//OWW69-028-3W5.K-136	OR826	SRW						8.89	8.99	
820824	STEPHENS	17596	SRW						9.20	9.22	
820825	STEPHENS/CAMA//OR765.K-300	OR8238	HRW	55.3	2.4	690	659	9	8.34	8.38 <sup>VP</sup> -BCRGR	
820826	67-237-53H/178383.M76-324//OR7464.K-182	OR8214	HRW	61.1	3.3	720	683	8	8.12	8.17 <sup>VP</sup> -BCRGR	
820827	I-607/CAMA//OWW69-028-3W5.K-144	OR823	SRW						9.11	9.28	
820828	I-607/CAMA//OWW69-028-3W5.K-184	OR8215	HRW	59.2	3.1	730	711	8	8.50	8.52 <sup>VP</sup> -BCRGR	
820829	STEPHENS/CAMA//ID75537.K-228	OR8223	HRW	56.2	1.6	620	645	9	8.61	8.58 <sup>VP</sup> -BCRGR	
820830	SEL.101/CAMA//I-372/CAMA.K-2	OR8229	HRW	60.4	2.1	830	743	4	8.51	8.62 <sup>P</sup> -BCRGR	
820831	STEPHENS/P.I.173438(M76-479)PW77-16.K-36	OR8245	SRW						9.21	9.23	

COMMENTS: Most of the selections are soft red winters, however, several do have good overall quality characteristics.  
The outstanding sample in the group is OR8245.

P = Poor; Q = Questionable; VP = Very Poor





NURSCO 34

PENDLETON, OR

C.R. ROHDE

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	MTYPE	BABS
820832	MCDERMID/ROMANIAN//OR7141.K-83	6/OR8270	SWW	58.8	73.9	0.44	87.2	10.3	53.4	2M	
820833	RBS/HYS.C588-5E-03W5.CB114	6/M-132	SWW	58.2	72.2	0.44	85.1	10.7	54.2	1H	
820834	STEPHENS 2*/CAMA.K-115	5/OR8262	SWW	62.2	74.9	0.38	92.3	11.3	55.6	1H	
820835	ASPEN/HYS.CB240	6/M-276	SWW	60.0	73.2	0.50	82.3	10.1	54.2	2M	
820836	CD/P101//DRC.6720-69-13.CB29	6/M-340	SWW	59.7	71.7	0.45	83.5	10.0	57.1	3M	
820837	STEPHENS/P.1.173438(M76-479).PPW77-16...	6/OR8254	SWW	59.7	71.7	0.45	83.5	10.2	55.3	2M	
820838	CERCO/TKB841/1543.OWW/6028*-CB130	M-148	HRW	59.0	71.3	0.42	84.8	10.4	60.0	6M	64.6
820839	DAWS	5/17419	SWW	60.0	72.2	0.49	81.6	9.8	52.3	2M	
820840	WWP7147(FROM AUSTRALIA)CB-330.M-379	5/M-379	HRW	62.3	73.7	0.28	94.7	12.6	59.1	7M	63.9
820841	CAMA/3/ELGIN//166910/ELGIN.K-7	5/OR8265	HRW	60.4	74.6	0.42	88.3	12.0	58.4	3M	61.6
820842	STEPHENS/CAMA//OR765.K-284	5/OR8250	HRW	59.4	73.9	0.42	87.5	10.9	57.9	1M	58.0
820843	OWW70134-3W4//MC D/1783383.K-8	6/OR8266	HRW	60.5	74.9	0.38	90.5	11.9	58.3	2M	61.4
820844	STEPHENS	6/17596	SWW	58.4	73.7	0.44	87.2	10.9	54.4	2M	
820845	CORMORANT.CB-129	6/M-147	HRW	57.5	73.4	0.38	89.0	11.0	58.5	8M	62.7
820846	69-153/YMH.F3//67-237-69-24.OWW73210C...	6/M-350	SWW	61.2	72.2	0.48	82.6	11.9	55.5	2L	
820847	SEL.101/CAMA//1-372/CAMA.K-4	6/OR8258	HRW	58.6	72.7	0.42	86.4	11.7	58.5	2H	61.4
820848	ND/P101//7C.CB30	6/M-36	SWW	57.3	73.9	0.52	82.3	11.1	54.2	2M	
820849	STEPHENS 2*/CAMA.K-121	6/OR8271	SRW	60.0	74.6	0.41	89.9	11.2	52.6	2M	

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 11% Protein.

4/ Observed Values Corrected to 11% Protein.

5/ Particularly Promising Overall Quality Characteristics.

6/ Promising Overall Quality Characteristics.



PRELIMINARY WINTER WHEAT

WURSCO 34

PENDLETON, OR

C.R. ROHDE

LABNUM	VARIETY	IDNO	CLASS	BABSC	MTIME	LVOL	LVOLC	BCRGR	CODI	CODIC	RMKS
				3/			4/			4/	
820832	MCDERMID/ROMANIAN//DR7141.K-83	OR8270	SWW						8.85	8.77	
820833	RBS/HYS.C588-5E-03W5.CB114	M-132	SWW						9.22	9.19	
820834	STEPHENS 2*/CAMA.K-115	OR8262	SWW						8.56	8.60	
820835	ASPEN/HYS.CB240	M-276	SWW						8.81	8.71	
820836	CD/P101//DRC.6720-69-13.CB29	M-340	SWW						8.79	8.68	
820837	STEPHENS/P.1.173438(M76-479).P.W77-16...	OR8254	SWW						8.77	8.69	P-LVOL,BCRGR
820838	CERCO/TKB841/1543.OWW/6028*-C.B130	M-148	HRW	65.2	3.8	805	842	6	7.92	7.88	P-LVOL,BCRGR
820839	DAWS	17419	SWW						8.77	8.64	
820840	WVP7147(FROM AUSTRALIA)CB-330.M-379	M-379	HRW	62.3	3.3	970	871	2	8.34	8.47	
820841	CAMA/3/ELGIN//166910/ELGIN.K-7	OR8265	HRW	60.6	2.0	920	858	2	8.62	8.70	Q-MTIME
820842	STEPHENS/CAMA//OR765.K-284	OR8250	HRW	58.1	1.1	870	876	4	8.47	8.47	P-MTIME,LVOL&BCRGR
820843	OWW70134-3W4//MC D/1783383.K-8	OR8266	HRW	60.5	1.5	920	864	2	8.49	8.56	
820844	STEPHENS	17596	SWW						9.12	9.11	
820845	CORMORANT.CB-129	M-147	HRW	62.7	4.5	890	890	2	8.47	8.47	
820846	69-153/YMH.F3//67-237-69-24.OWW73210C...	M-350	SWW						8.62	8.72	
820847	SEL.101/CAMA//1-372/CAMA.K-4	OR8258	HRW	60.7	1.8	955	912	2	8.67	8.73	
820848	ND/P101//7C.CB30	M-36	SWW						9.02	9.04	
820849	STEPHENS 2*/CAMA.K-121	OR8271	SRW						8.90	8.92	

COMMENTS: Several of these selections have good overall quality both for soft and hard wheats. OR8265, OR8266 and OR8258 have dual purpose properties, limited only by dough mixing properties. M-147 has all the desirable dual purpose properties.

P = Poor; Q = Questionable

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NURSCO 35

CA

D. SHERMAN

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE
						1/		1/	3/	
820850		B-82-48	HWW	60.0	71.1	0.44	83.8	8.6	54.8	6L
820851		D-82-50	HWW	62.0	69.5	0.37	85.8	10.6	56.6	7H
820852		F-82-52	HWW	65.2	71.8	0.34	89.6	10.5	58.5	5H
820853		G-82-54	HWW	62.8	70.6	0.42	84.0	10.6	54.4	7H
820854		H-82-55	HWW	63.6	71.0	0.42	84.7	8.8	55.9	6L
820855		I-82-56	HWW	66.0	70.8	0.39	86.0	9.5	57.8	8M
820856		J-82-57	HWW	61.6	69.5	0.37	85.6	9.5	58.9	7H

1/ Observed Values Corrected to 14% Moisture Basis.3/ Absorption at 14% Moisture Corrected to 10% Protein. 5/ Particularly Promising Overall Quality Characteristics.4/ Observed Values Corrected to 10% Protein. 6/ Promising Overall Quality Characteristics.

## COMMENTS:

These seven samples of Klasic were evaluated in co-operation with Western Grain Marketing Inc., Stockton, CA. Klasic is hard white wheat with reported yields comparable to Anza. Sample B-82-48 performed the poorest in both milling and baking. A high flour ash lowered the milling score; it was the lowest in protein (8.6%) and a little heavy in crumb grain (BCRGR). All the others were satisfactory in overall quality, yielding exceptional loaf volumes and crumb grains for their protein contents.





NURSCO 35

CA

D. SHERMAN

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC 3/	MTIME	LVOL	LVOLC 4/	BCRGR	RMKS
820850		B-82-48	HWW	57.5	58.9	6.0	975	1062		3
820851		D-82-50	HWW	61.8	61.2	9.2	1128	1091		2
820852		F-82-52	HWW	63.6	63.1	4.6	1115	1084		2
820853		G-82-54	HWW	59.6	59.0	8.1	1115	1078		2
820854		H-82-55	HWW	61.3	62.5	7.3	923	997		2
820855		I-82-56	HWW	63.4	63.9	5.9	970	1001		2
820856		J-82-57	HWW	62.5	63.0	7.4	1135	1166		2



NURSCO 36

HOOPER, WA

H. JACQUOT

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC
					1/			1/	3/
820857	STEPHENS		SWW	58.6	71.3	0.36	84.9	7.0	47.3
820858	DAWS		SWW	60.4	68.7	0.35	82.0	6.3	49.7
820859	JACMAR		CLUB	56.9	70.6	0.37	85.1	6.4	48.9
820860	FARO		CLUB	58.2	71.6	0.37	86.5	6.3	49.5
820861	TYEE		CLUB	58.6	72.9	0.36	89.0	5.8	49.8
820862	SN-399-79		5/SWW	58.5	73.7	0.36	88.5	6.1	49.4
820863	SN-348-81		6/CLUB	57.7	71.0	0.39	83.6	6.3	48.7
820864	SN-463-78		6/CLUB	57.8	71.7	0.38	85.8	6.1	48.8
820865	SN-121-81		5/SWW	58.3	73.4	0.37	88.4	6.0	48.5
820866	SN-346-81		6/CLUB	57.2	70.0	0.37	83.1	5.6	49.5
820867	AN-30-82		5/SWW	59.1	73.2	0.36	87.8	7.0	48.3
820868	AN-31-82		5/SWW	58.8	74.0	0.35	90.6	6.7	48.2

LABNUM	VARIETY	IDNO	CLASS	MTYPE	CODI	CODIC	CAVOL	SCSOR	RMKS
						4/			
820857	STEPHENS		SWW	5L	9.34	9.45	1375	79.0	
820858	DAWS		SWW	5L	8.87	8.90	1345	79.0	
820859	JACMAR		CLUB	7L	9.54	9.57	1455	87.0	
820860	FARO		CLUB	2L	9.24	9.27	1420	82.0	
820861	TYEE		CLUB	1L	9.28	9.27	1400	82.0	
820862	SN-399-79		SWW	8L	9.61	9.62	1470	85.0	
820863	SN-348-81		CLUB	5L	9.52	9.55	1440	86.0	
820864	SN-463-78		CLUB	8L	9.69	9.69	1420	84.0	
820865	SN-121-81		SWW	8L	9.41	9.41	1380	83.0	Q-FYELD&MSCOR
820866	SN-346-81		CLUB	8L	9.56	9.53	1415	83.0	
820867	AN-30-82		SWW	4L	9.44	9.55	1380	82.0	
820868	AN-31-82		SWW	8L	9.21	9.29	1390	81.0	

1/ Observed Values Corrected to 14% Moisture Basis.5/ Particularly Promising Overall Quality Characteristics.3/ Absorption at 14% Moisture Corrected to 6% Protein.6/ Promising Overall Quality Characteristics.4/ Observed Values Corrected to 6% Protein.

COMMENTS: All of these experimental selections have good promising overall quality characteristics.

Q = Questionable



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LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE	CODI	CODIC	RMKS
						1/		1/	3/			4/	
820869	(BC 60 X CALIDAD)*ANZA	EXP 211/2	CLUB	64.8	71.4	0.41	85.6	11.3	57.8	3H	8.37	8.47P-CODI	Hard type
820870	(BC 60 X CALIDAD)*ANZA	EXP 211/3	CLUB	64.0	71.6	0.41	86.4	11.0	58.9	3H	8.32	8.40P-CODI	"
820871	(BC 60 X CALIDAD)*ANZA	EXP 211/5	CLUB	64.4	71.1	0.41	85.4	10.9	58.6	3H	8.41	8.48"	"
820872	(BC 60 X CALIDAD)*ANZA	EXP 211/8	CLUB	64.0	70.3	0.42	83.7	10.3	59.3	6M	8.39	8.41"	"
820873	(BC 60 X CALIDAD)*ANZA	EXP 211/10	CLUB	64.8	71.5	0.42	85.7	10.8	59.0	3H	8.36	8.42"	"
820874	(BC 60 X CALIDAD)*ANZA	EXP 211/11	CLUB	64.4	71.0	0.41	85.6	11.3	57.8	3H	8.46	8.55P-CODI	Hard type
820875	(BC 60 X CALIDAD)*ANZA	EXP 211/12	CLUB	63.6	70.7	0.39	86.6	11.3	56.8	3H	8.54	8.63"	"
820876	(BC 60 X CALIDAD)*ANZA	EXP 211/13	CLUB	63.6	67.9	0.37	83.8	8.5	53.8	3L	9.15	9.04Q-MILLING	"
820877	(BC 60 X CALIDAD)*ANZA	EXP 211/14	CLUB	64.8	68.1	0.39	82.8	9.1	54.0	7M	9.17	9.11Q-MILLING	"
820878	(BC 60 X CALIDAD)*ANZA	EXP 211/15	CLUB	64.0	67.4	0.38	83.0	9.1	54.0	3M	9.35	9.29"	"
820879	(BC 60 X CALIDAD)*ANZA	EXP 211/16	CLUB	64.4	67.6	0.39	82.4	9.2	54.1	6M	9.11	9.06Q-MILLING	"
820880	(BC 60 X CALIDAD)*ANZA	*6/ EXP 211/19	CLUB	64.0	69.5	0.37	85.8	8.7	54.4	3M	9.19	9.10	"
820881	(BC 60 X CALIDAD)*ANZA	EXP 211/22	CLUB	63.6	67.1	0.37	82.8	9.6	52.8	4L	9.06	9.03Q-MILLING	"
820882	(BC 60 X CALIDAD)*ANZA	6/ EXP 211/23	CLUB	64.0	68.8	0.38	84.7	9.1	54.3	3M	9.14	9.07	"
820883	(BC 60 X CALIDAD)*ANZA	EXP 211/26	CLUB	64.4	65.7	0.39	79.9	9.5	53.0	4L	9.14	9.10V.Poor Milling	"
820884	(BC 60 X CALIDAD)*ANZA	*6/ EXP 211/27	CLUB	63.2	69.3	0.38	85.0	8.4	54.1	2M	9.24	9.12	"
820885	(BC 60 X CALIDAD)*ANZA	EXP 211/28	CLUB	63.6	67.4	0.39	82.3	9.4	52.4	6M	9.09	9.04Q-MILLING	"
820886	(BC 60 X CALIDAD)*ANZA	6/ EXP 211/29	CLUB	62.8	68.4	0.38	83.7	9.5	53.3	4M	9.26	9.23	"
820887	(BC 60 X CALIDAD)*ANZA	6/ EXP 211/32	CLUB	64.8	68.7	0.38	84.1	8.9	52.6	4L	9.35	9.27	"
820888	(BC 60 X CALIDAD)*ANZA	EXP 211/33	CLUB	64.8	65.3	0.38	79.7	10.2	54.3	8M	8.89	8.90V.Poor Milling	"
820889	(BC 60 X CALIDAD)*ANZA	EXP 211/35	CLUB	63.2	68.4	0.40	82.6	9.5	52.0	3M	9.19	9.15Q-MILLING	"
820890	(BC 60 X CALIDAD)*ANZA	EXP 211/36	CLUB	65.2	67.2	0.40	81.5	8.9	53.4	6L	9.07	9.00P-MILLING	"
820891	(BC 60 X CALIDAD)*ANZA	EXP 211/39	CLUB	64.4	67.0	0.39	81.4	9.3	53.7	4M	9.29	9.24"	"
820892	(BC 60 X CALIDAD)*ANZA	EXP 211/40	CLUB	64.8	67.9	0.39	82.5	9.0	54.1	8M	9.06	8.99"	"
820893	(BC 60 X CALIDAD)*ANZA	EXP 211/43	CLUB	64.0	71.3	0.42	85.0	9.0	53.5	4M	8.74	8.67P-CODI	Hard Type
820894	(BC 60 X CALIDAD)*ANZA	EXP 211/47	CLUB	64.8	68.4	0.40	82.7	8.5	54.5	4L	9.26	9.16Q-MILLING	"

1/ Observed Values Corrected to 14% Moisture Basis. 5/ Particularly Promising Overall Quality Characteristics.  
 3/ Absorption at 14% Moisture Corrected to 10% Protein. 6/ Promising Overall Quality Characteristics.  
 4/ Observed Values Corrected to 10% Protein.

COMMENTS: Note that selections 2-12, and No. 43 are hard endosperm selections. The hard texture was advantageous for flour yield but the flours had poor cookie diameters (typical for hard wheat). Hardness was verified by NIR reflectance analysis (data not listed). Only five (5) selections identified with footnotes have much promise for overall quality. Selections 19 and 27 are most promising. Without a known club check variety for reference overall rating with a degree of confidence is risky.  
 P = Poor Q = Questionable





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LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE	CODI	CODIC	RMKS
					1/			1/	3/			4/	
820895	(BC 60 X CALIDAD)*ANZA	EXP 218/1	CLUB	64.6	65.3	0.36	81.1	9.8	53.7	6L	8.91	8.97	P-FYELD
820896	(BC 60 X CALIDAD)*ANZA	EXP 218/2	CLUB	62.6	68.0	0.40	82.0	9.9	54.9	4M	9.00	9.06	Q-MILLING
820897	(BC 60 X CALIDAD)*ANZA	EXP 218/4	CLUB	62.6	68.5	0.40	83.1	9.3	54.8	3M	9.11	9.13	Q-MILLING
820898	(BC 60 X CALIDAD)*ANZA	EXP 218/5	CLUB	61.9	68.1	0.39	83.3	10.0	53.8	8M	9.05	9.12	" "
820899	(BC 60 X CALIDAD)*ANZA	EXP 218/6	CLUB	63.8	68.2	0.40	82.5	9.3	54.4	7M	8.91	8.93	" "
820900	(BC 60 X CALIDAD)*ANZA	6/EXP 218/7	CLUB	63.1	69.3	0.38	85.0	9.0	54.0	2M	9.46	9.46	Outstanding CODI
820901	(BC 60 X CALIDAD)*ANZA	EXP 218/8	CLUB	64.1	68.4	0.39	83.2	9.2	55.3	3M	9.15	9.16	Q-MILLING
820902	(BC 60 X CALIDAD)*ANZA	EXP 218/9	CLUB	64.6	67.7	0.39	82.2	9.5	54.1	6M	8.95	8.99	P-FYELD
820903	(BC 60 X CALIDAD)*ANZA	EXP 218/12	CLUB	64.8	65.8	0.38	80.7	10.1	56.0	7M	8.87	8.95	P-FYELD
820904	(BC 60 X CALIDAD)*ANZA	EXP 218/13	CLUB	64.0	66.4	0.39	80.6	8.8	54.6	5M	9.14	9.12	P-FYELD
820905	(BC 60 X CALIDAD)*ANZA	6/EXP 218/14	CLUB	65.0	73.0	0.41	88.1	10.3	54.0	2M	8.97	9.07	Q-HARDNESS
820906	(BC 60 X CALIDAD)*ANZA	EXP 218/15	CLUB	63.1	65.6	0.40	79.1	9.4	54.6	5M	8.97	9.00	P-FYELD
820907	(BC 60 X CALIDAD)*ANZA	EXP 218/16	CLUB	63.9	65.9	0.39	79.8	8.7	55.5	4M	8.91	8.89	P-FYELD
820908	(BC 60 X CALIDAD)*ANZA	*6/EXP 218/17	CLUB	63.8	70.2	0.36	87.3	9.2	53.8	2M	9.24	9.25	Q-HARDNESS
820909	(BC 60 X CALIDAD)*ANZA	6/EXP 218/18	CLUB	64.2	70.1	0.41	84.3	10.1	53.5	8M	8.99	9.07	Q-HARDNESS
820910	(BC 60 X CALIDAD)*ANZA	EXP 218/19	CLUB	64.0	68.3	0.38	83.9	9.7	53.3	8M	9.24	9.29	Q-MILLING
820911	(BC 60 X CALIDAD)*ANZA	EXP 218/20	CLUB	63.7	67.4	0.39	82.4	8.9	55.3	3M	9.00	8.99	P-FYELD
820912	(BC 60 X CALIDAD)*ANZA	EXP 218/21	CLUB	63.4	70.3	0.43	83.3	10.7	56.9	6M	8.66	8.78	Hard Endosperm
820913	(BC 60 X CALIDAD)*ANZA	6/EXP 218/22	CLUB	62.6	68.5	0.38	84.3	9.7	53.9	3M	9.21	9.26	Hard Endosperm
820914	(BC 60 X CALIDAD)*ANZA	EXP 218/23	CLUB	64.8	70.7	0.41	84.9	9.6	57.1	8M	8.71	8.76	Hard Endosperm
820915	(BC 60 X CALIDAD)*ANZA	6/EXP 218/24	CLUB	64.1	68.9	0.37	85.4	9.4	54.4	2M	8.91	8.94	P-CODI Hard Endo.
820916	(BC 60 X CALIDAD)*ANZA	EXP 218/25	CLUB	64.5	72.1	0.42	86.2	8.4	55.8	7M	8.57	8.53	P-CODI Hard Endo.
820917	(BC 60 X CALIDAD)*ANZA	6/EXP 218/26	CLUB	63.2	69.5	0.40	84.4	9.2	55.1	6M	9.20	9.21	Hard Endosperm
820918	(BC 60 X CALIDAD)*ANZA	6/EXP 218/27	CLUB	64.0	69.7	0.41	83.9	9.0	54.2	3M	9.15	9.15	Q-MILLING
820919	(BC 60 X CALIDAD)*ANZA	EXP 218/29	CLUB	64.0	68.3	0.39	83.5	8.8	54.2	3M	9.19	9.17	Q-MILLING
820920	(BC 60 X CALIDAD)*ANZA	6/EXP 218/30	CLUB	63.4	69.4	0.41	83.4	9.5	54.5	3M	9.10	9.14	Hard Endosperm
820921	(BC 60 X CALIDAD)*ANZA	EXP 218/31	CLUB	64.2	71.4	0.41	85.9	9.4	56.1	5M	8.72	8.75	Hard Endosperm
820922	(BC 60 X CALIDAD)*ANZA	EXP 218/32	CLUB	63.9	67.3	0.43	79.6	8.3	55.0	6L	9.22	9.18	P-FYELD
820923	(BC 60 X CALIDAD)*ANZA	EXP 218/33	CLUB	64.8	69.4	0.42	82.5	10.4	54.7	3M	9.10	9.20	Q-MILL&HARDNESS
820924	(BC 60 X CALIDAD)*ANZA	6/EXP 218/34	CLUB	63.9	69.6	0.41	83.6	9.3	55.1	6M	9.12	9.15	Q-MILL&HARDNESS
820925	(BC 60 X CALIDAD)*ANZA	6/EXP 218/35	CLUB	63.1	70.6	0.40	85.8	9.1	54.7	3M	9.00	9.01	P-CODI-Hard Endo.
820926	(BC 60 X CALIDAD)*ANZA	6/EXP 218/36	CLUB	63.3	69.3	0.37	85.7	8.8	55.0	3M	9.05	9.04	P-CODI-Hard Endo.
820927	(BC 60 X CALIDAD)*ANZA	EXP 218/37	CLUB	63.9	71.3	0.41	85.6	8.7	55.6	6L	8.52	8.50	P-CODI-Hard Endo.
820928	(BC 60 X CALIDAD)*ANZA	EXP 218/38	CLUB	63.8	67.2	0.42	80.1	9.0	53.1	3M	9.12	9.12	P-FYELD
820929	(BC 60 X CALIDAD)*ANZA	EXP 218/42	CLUB	64.5	67.1	0.40	80.8	9.2	54.7	8M	8.95	8.96	P-FYELD

1/ Observed Values Corrected to 14% Moisture Basis.

5/ Particularly Promising Overall Quality Characteristics.

3/ Absorption at 14% Moisture Corrected to 9% Protein.

6/ Promising Overall Quality Characteristics.

4/ Observed Values Corrected to 9% Protein.



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LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE	CODI	CODIC	RMKS
820930	(BC 60 X CALIDAD)*ANZA	EXP 218/43	CLUB	64.6	65.4	0.38	80.3	10.4	56.3	6M	8.92	9.02	P-FYELD
820931	(BC 60 X CALIDAD)*ANZA	EXP 218/44	CLUB	64.1	67.1	0.38	82.2	10.6	55.5	6M	9.19	9.30	"
820932	(BC 60 X CALIDAD)*ANZA	EXP 218/45	CLUB	64.2	67.5	0.38	82.9	10.3	55.7	6M	8.94	9.03	"
820933	(BC 60 X CALIDAD)*ANZA	EXP 218/46	CLUB	64.7	66.6	0.37	82.4	10.0	54.5	6M	9.02	9.10	"
820934	(BC-60-C19573) NORTENO 66*ANZA	EXP 218/48	CLUB	64.1	73.2	0.44	86.2	9.9	53.1	1M	8.51	8.58	P-CODI, Hard Endo.

## COMMENTS:

Note that selections 14, 18, 21, 23, 25, 34, 37, and 48 have hard endosperm texture, which lowered cookie diameters on most of them. Several other selections have poor milling properties. The selections which appear worthy of further testing are footnoted. Selections 14 and 18 had hard texture but gave good cookie spread and are interesting in that respect.

P = Poor Q = Questionable





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LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	MTYPE
820935	TZPP*ANZA2(74055-5D)	6/222/ENT2	HRS	62.6	72.6	0.40	87.5	9.7	59.3	4H
820936	TZPP*ANZA2(74055-6D)	222/ENT4	HRS	61.6	71.6	0.41	85.7	10.0	59.7	7M
820937	TZPP*ANZA2(74055-6D)	6/222/ENT5	HRS	63.3	72.8	0.38	88.5	10.5	59.8	8M
820938	TZPP*ANZA2(74055-11D)	222/ENT8	HRS	63.1	72.1	0.38	87.8	9.5	59.0	2H
820939	TZPP*ANZA2(74055-11D)	222/ENT8	HRS	61.9	71.8	0.41	85.8	9.5	60.4	2H
820940	TZPP*ANZA2(74055-18D)	6/222/ENT10	HRS	63.0	72.6	0.39	87.7	9.7	60.0	4H
820941	TZPP*ANZA2(74055-26D)	6/222/ENT11	HRS	63.9	71.1	0.42	84.5	9.4	61.1	4H
820942	ANZA	222/ENT12	HRS	63.6	71.2	0.39	86.2	9.1	58.1	3M
820943	TZPP X ANZA2(74055-32D)	6/222/ENT13	HRS	63.8	71.6	0.37	87.7	10.1	60.3	8M
820944	TZPP X ANZA2(74055-32D)	222/ENT14	HRS	62.8	69.5	0.37	85.6	9.5	59.7	6M
820945	TZPP X ANZA2(74055-36D)	222/ENT16	HRS	62.7	70.6	0.43	83.6	9.8	58.7	6M
820946	TZPP X ANZA2(74055-37D)	222/ENT17	HRS	62.4	72.2	0.42	85.8	9.3	58.7	6M
820947	TZPP X ANZA2(74055-37D)	6/222/ENT18	HRS	63.9	71.5	0.43	84.7	9.1	60.3	8M
820948	TZPP X ANZA2(74055-60D)	222/ENT19	HRS	59.5	68.7	0.43	81.5	9.1	60.0	4M
820949	TZPP X ANZA2(74055-70D)	222/ENT22	HRS	63.8	71.0	0.40	85.4	8.9	57.3	4M
820950	YECORA ROJO	222/ENT24	HRS	62.0	68.8	0.44	81.4	9.5	59.2	8M
820951	TZPP*ANZA2(74055-87D)	222/ENT25	HRS	58.7	71.1	0.38	87.0	9.6	57.2	3M
820953	TZPP*ANZA2(74055-89D)	222/ENT27	HRS	60.6	70.1	0.43	83.0	8.5	58.8	3M
820954	TZPP*ANZA2(74055-89D)	6/222/ENT28	HRS	59.4	69.5	0.43	82.3	9.8	59.2	7M
820955	TZPP*ANZA2(74055-89D)	6/222/ENT29	HRS	64.2	71.5	0.41	85.5	9.7	59.1	8M
820956	TZPP*ANZA2(74055-1D)	222/ENT30	HRS	64.0	70.9	0.40	85.4	8.5	57.5	3M
820957	TZPP*ANZA2(74055-1D)	5/222/ENT31	HRS	62.1	71.2	0.41	85.3	8.9	58.6	3M
820958	TZPP*ANZA2(74055-5D)	6/222/ENT32	HRS	64.1	72.2	0.41	86.5	9.5	59.9	3H
820959	TZPP*ANZA2(74055-27D)	6/222/ENT37	HRS	62.0	70.4	0.43	83.4	10.1	59.8	3H
820960	TZPP*ANZA2(74055-37D)	222/ENT42	HRS	63.9	72.4	0.42	86.2	8.9	59.9	4M
820961	TZPP*ANZA2(74055-38D)	5/222/ENT43	HRS	65.7	71.6	0.39	86.7	9.4	59.4	3H
820962	TZPP*ANZA2(74055-39D)	6/222/ENT45	HRS	64.8	71.8	0.42	85.4	9.6	59.5	3H
820963	TZPP*ANZA2(74055-39D)	5/222/ENT46	HRS	64.2	72.7	0.41	86.9	9.9	59.5	2H
820964	TZPP*ANZA2(74055-40D)	6/222/ENT47	HRS	63.7	71.1	0.41	85.1	10.2	60.7	4H
820965	TZPP*ANZA2(74055-40D)	6/222/ENT48	HRS	65.1	72.6	0.41	86.5	9.2	58.1	3M
820966	TZPP*ANZA2(74055-43D)	222/ENT49	HRS	63.6	70.4	0.40	84.8	8.5	58.7	3M
820967	TZPP*ANZA2(74055-60D)	6/222/ENT52	HRS	63.5	72.2	0.40	86.9	10.3	59.1	6M
820968	TZPP*ANZA2(74055-62D)	222/ENT53	HRS	63.8	71.6	0.38	87.3	9.8	58.7	4M
820969	TZPP*ANZA2(74055-63D)	6/222/ENT55	HRS	63.1	70.5	0.40	85.1	9.4	57.4	2M
820970	TZPP*ANZA2(74055-63D)	6/222/ENT56	HRS	63.3	71.6	0.39	86.6	9.8	60.1	4M

1/ Observed Values Corrected to 14% Moisture Basis.

5/ Particularly Promising Overall Quality Characteristics.

3/ Absorption at 14% Moisture Corrected to 9% Protein.

6/ Promising Overall Quality Characteristics.

4/ Observed Values Corrected to 9% Protein.





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LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR	RMKS
					3/			4/		
820935	TZPP*ANZA2(74055-5D)	222/ENT2	HRS	62.2	61.5	3.4	898	855	3	P-BCRGR
820936	TZPP*ANZA2(74055-6D)	222/ENT4	HRS	62.9	61.9	4.2	855	793	7	P-BCRGR
820937	TZPP*ANZA2(74055-6D)	222/ENT5	HRS	66.5	65.0	5.0	888	795	2	P-BCRGR
820938	TZPP*ANZA2(74055-11D)	222/ENT8	HRS	60.7	60.2	2.2	825	794	6	P-BCRGR
820939	TZPP*ANZA2(74055-11D)	222/ENT8	HRS	62.1	61.6	2.5	860	829	6	P-BCRGR
820940	TZPP*ANZA2(74055-18D)	222/ENT10	HRS	63.4	62.7	3.4	905	862	2	
820941	TZPP*ANZA2(74055-26D)	222/ENT11	HRS	66.2	65.8	4.1	883	858	2	
820942	ANZA	222/ENT12	HRS	60.4	60.3	2.1	815	809	5	P-BCRGR
820943	TZPP X ANZA2(74055-32D)	222/ENT13	HRS	67.1	66.0	6.4	925	857	2	
820944	TZPP X ANZA2(74055-32D)	222/ENT14	HRS	62.9	62.4	3.9	865	834	6	P-BCRGR
820945	TZPP X ANZA2(74055-36D)	222/ENT16	HRS	63.2	62.4	3.8	850	800	3	Q-MSCOR,BCRGR
820946	TZPP X ANZA2(74055-37D)	222/ENT17	HRS	61.2	60.9	3.8	790	771	9	VP-BCRGR
820947	TZPP X ANZA2(74055-37D)	222/ENT18	HRS	63.6	63.5	4.5	815	809	2	
820948	TZPP X ANZA2(74055-60D)	222/ENT19	HRS	60.8	60.7	2.5	775	769	9	VP-BCRGR
820949	TZPP X ANZA2(74055-70D)	222/ENT22	HRS	58.9	59.0	2.6	835	841	8	VP-BCRGR
820950	YECORA ROJO	222/ENT24	HRS	62.9	62.4	8.0	845	814	2	P-FYELD
820951	TZPP*ANZA2(74055-87D)	222/ENT25	HRS	58.0	57.4	1.6	590	553	9	VP-LVOL,BCRGR
820953	TZPP*ANZA2(74055-89D)	222/ENT27	HRS	58.5	59.0	2.0	625	656	9	VP-LVOL,BCRGR
820954	TZPP*ANZA2(74055-89D)	222/ENT28	HRS	60.2	59.4	3.4	680	630	9	VP-LVOL,BCRGR
820955	TZPP*ANZA2(74055-89D)	222/ENT29	HRS	64.5	63.8	5.1	858	815	3	Q-BCRGR
820956	TZPP*ANZA2(74055-1D)	222/ENT30	HRS	59.2	59.7	2.3	780	811	8	P-BCRGR
820957	TZPP*ANZA2(74055-1D)	222/ENT31	HRS	59.7	59.8	2.1	840	846	5	P-BCRGR
820958	TZPP*ANZA2(74055-5D)	222/ENT32	HRS	62.6	62.1	3.0	920	889	2	
820959	TZPP*ANZA2(74055-27D)	222/ENT37	HRS	62.6	61.5	3.1	915	847	2	
820960	TZPP*ANZA2(74055-37D)	222/ENT42	HRS	61.5	61.6	3.7	815	821	4	P-BCRGR
820961	TZPP*ANZA2(74055-38D)	222/ENT43	HRS	62.0	61.6	2.8	925	900	1	
820962	TZPP*ANZA2(74055-39D)	222/ENT45	HRS	63.3	62.7	3.4	930	893	2	
820963	TZPP*ANZA2(74055-39D)	222/ENT46	HRS	62.6	61.7	2.5	885	829	2	
820964	TZPP*ANZA2(74055-40D)	222/ENT47	HRS	65.1	63.9	4.6	928	854	2	
820965	TZPP*ANZA2(74055-40D)	222/ENT48	HRS	60.5	60.3	2.2	850	838	2	
820966	TZPP*ANZA2(74055-43D)	222/ENT49	HRS	59.4	59.9	2.1	835	866	4	Q-BCRGR
820967	TZPP*ANZA2(74055-60D)	222/ENT52	HRS	63.6	62.3	3.7	908	827	2	
820968	TZPP*ANZA2(74055-62D)	222/ENT53	HRS	61.7	60.9	2.2	900	850	6	P-BCRGR
820969	TZPP*ANZA2(74055-63D)	222/ENT55	HRS	58.0	57.6	1.8	815	790	7	P-MTIME&BCRGR
820970	TZPP*ANZA2(74055-63D)	222/ENT56	HRS	62.1	61.3	3.3	913	863	3	Q-BCRGR



NURSCO 39

DAVIS, CA

C.O. QUALSET

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	MTYPE
820971	TZPP*ANZA2(74055-66D)	*5/222/ENT57	HRS	64.5	71.8	0.41	86.2	8.8	59.6	4M
820972	TZPP*ANZA2(74055-69D)	222/ENT59	HRS	64.4	71.5	0.36	88.5	10.3	60.2	3H
820973	TZPP*ANZA2(74055-80D)	222/ENT61	HRS	63.6	70.4	0.43	83.2	9.2	61.1	4H
820974	TZPP*ANZA2(74055-82D)	5/222/ENT62	HRS	63.2	70.7	0.41	84.9	9.8	60.5	4H
820975	TZPP*ANZA2(74055-82D)	222/ENT63	HRS	63.4	70.8	0.41	84.8	9.0	57.3	3M
820976	TZPP*ANZA2(74055-94D)	6/222/ENT66	HRS	63.6	71.0	0.42	84.7	9.7	60.6	4H

COMMENTS: Several of these selections have good overall hard red wheat quality. The outstanding selection is #59. Others noteworthy are 32, 43, 47, and 62. See "REMARKS" for others that are very poor quality.

P = Poor; VP = Very Poor; Q = Questionable



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TZPP\*ANZA2-EXP.222

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NURSCO 39

DAVIS, CA

C.O. QUALSET

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR	RMKS
					3/			4/		
820971	TZPP*ANZA2(74055-66D)	222/ENT57	HRS	61.6	61.8	3.0	840	852	5	P-BCRGR
820972	TZPP*ANZA2(74055-69D)	222/ENT59	HRS	63.2	61.9	2.7	975	894	1	
820973	TZPP*ANZA2(74055-80D)	222/ENT61	HRS	63.0	62.8	3.4	875	863	3	Q-FYELD,BCRGR
820974	TZPP*ANZA2(74055-82D)	222/ENT62	HRS	63.5	62.7	3.2	950	900	1	
820975	TZPP*ANZA2(74055-82D)	222/ENT63	HRS	57.5	57.5	2.0	855	855	7	VP-BCRGR
820976	TZPP*ANZA2(74055-94D)	222/ENT66	HRS	63.5	62.8	3.1	930	887	2	





NURSCO 40

DAVIS, CA

C.O. QUALSET

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE
						1/		1/	3/	
820977	ANZA*CAJENE 71 (71503-357D)	231/ENT5	HRW	62.9	71.0	0.40	85.6	9.7	59.0	7M
820978	ANZA*CAJENE 71 (71503-12D)	231/ENT12	HRW	62.7	68.4	0.43	81.1	9.4	60.4	7M
820979	ANZA*CAJENE 71 (71503-79D)	5/231/ENT23	HRW	64.0	71.5	0.38	87.4	10.0	58.8	3M
820980	ANZA	231/ENT30	HRW	63.0	70.8	0.39	85.9	9.4	58.6	3M
820981	ANZA*CAJENE 71 (71503-173D)	231/ENT40	HRW	63.9	69.2	0.37	85.4	9.1	58.1	3M
820982	ANZA*CAJENE 71 (71503-191D)	231/ENT44	HRW	62.9	67.9	0.37	83.8	10.3	61.4	4H
820983	ANZA*CAJENE 71 (71503-200D)	231/ENT45	HRW	63.5	69.4	0.41	83.4	9.0	61.5	8M
820984	ANZA*CAJENE 71 (71503-262D)	231/ENT50	HRW	63.1	69.7	0.42	83.3	10.4	59.4	3M
820985	ANZA*CAJENE 71 (71503-267D)	231/ENT52	HRW	61.7	68.6	0.42	82.2	9.8	58.7	6M
820986	ANZA*CAJENE 71 (71503-105D)	231/ENT62	HRW	63.9	69.3	0.41	83.5	9.3	58.9	5M
820987	ANZA*CAJENE 71 (71503-193D)	5/231/ENT78	HRW	61.8	71.7	0.39	86.7	9.8	59.0	6M
820988	ANZA*CAJENE 71 (71503-228D)	6/231/ENT84	HRW	63.1	70.1	0.40	84.6	9.5	58.7	6M
820989	ANZA*CAJENE 71 (71503-254D)	6/231/ENT90	HRW	62.5	70.8	0.40	85.3	9.9	59.4	8M
820990	ANZA*CAJENE 71 (71503-280D)	6/231/ENT94	HRW	62.4	70.1	0.43	83.0	9.8	60.5	4H
820991	YECORA ROJO	231/ENT96	HRW	61.6	68.1	0.44	80.4	9.9	60.4	7H
820992	ANZA*CAJENE 71 (71503-45D)	231/ENT97	HRW	64.6	68.4	0.42	81.7	10.1	61.4	5H
820993	ANZA*CAJENE 71 (71503-127D)	5/231/ENT99	HRW	62.2	71.0	0.40	85.6	10.1	59.4	6H
820994	ANZA*CAJENE 71 (71503-133D)	231/ENT100	HRW	63.2	69.4	0.40	83.8	8.9	57.8	4M
820995	ANZA*CAJENE 71 (71503-268D)	6/231/ENT101	HRW	63.4	69.4	0.43	82.2	10.1	58.9	6M
820996	ANZA*CAJENE 71 (71503-300D)	6/231/ENT102	HRW	63.1	70.0	0.39	85.0	9.7	58.0	3M
820997	ANZA*CAJENE 71 (71503-354D)	*5/231/ENT103	HRW	63.7	71.1	0.38	86.7	10.5	60.5	8M
820998	ANZA*CAJENE 71 (71503-367D)	231/ENT104	HRW	64.1	69.5	0.37	85.5	10.5	59.3	3M

1/ Observed Values Corrected to 14% Moisture Basis.

5/ Particularly Promising Overall Quality Characteristics.

3/ Absorption at 14% Moisture Corrected to 10% Protein.

6/ Promising Overall Quality Characteristics.

4/ Observed Values Corrected to 10% Protein.



NURSCO 40

DAVIS, CA

C.O. QUALSET

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR	RMKS
					3/			4/		
820977	ANZA*CAJENE 71 (71503-357D)	231/ENT5	HRW	61.9	62.2	3.8	850	869	4 P-BCRGR	
820978	ANZA*CAJENE 71 (71503-12D)	231/ENT12	HRW	64.0	64.6	4.1	850	887	4 P-FYELD,BCRGR	
820979	ANZA*CAJENE 71 (71503-79D)	231/ENT23	HRW	61.5	61.5	2.4	845	845	2	
820980	ANZA	231/ENT30	HRW	61.2	61.8	2.6	800	837	5	
820981	ANZA*CAJENE 71 (71503-173D)	231/ENT40	HRW	61.4	62.3	2.8	765	821	6 P-LVOL,BCRGR	
820982	ANZA*CAJENE 71 (71503-191D)	231/ENT44	HRW	65.9	65.6	3.3	935	916	2 P-FYELD	
820983	ANZA*CAJENE 71 (71503-200D)	231/ENT45	HRW	64.7	65.7	5.3	800	862	6 P-BCRGR	
820984	ANZA*CAJENE 71 (71503-262D)	231/ENT50	HRW	63.0	62.6	2.6	840	815	5 P-BCRGR	
820985	ANZA*CAJENE 71 (71503-267D)	231/ENT52	HRW	62.2	62.4	3.2	885	897	3 Q-FYELD,BCRGR	
820986	ANZA*CAJENE 71 (71503-105D)	231/ENT62	HRW	60.9	61.6	2.6	770	813	3 Q-FYELD,BCRGR	
820987	ANZA*CAJENE 71 (71503-193D)	231/ENT78	HRW	60.0	60.2	2.9	900	912	2	
820988	ANZA*CAJENE 71 (71503-228D)	231/ENT84	HRW	60.4	60.9	2.8	885	916	2	
820989	ANZA*CAJENE 71 (71503-254D)	231/ENT90	HRW	62.5	62.6	5.2	875	881	2	
820990	ANZA*CAJENE 71 (71503-280D)	231/ENT94	HRW	62.5	62.7	3.1	900	912	2	
820991	YECORA ROJO	231/ENT96	HRW	64.0	64.1	8.7	910	916	2 P-FYELD	
820992	ANZA*CAJENE 71 (71503-45D)	231/ENT97	HRW	65.7	65.6	5.1	855	849	2 P-FYELD,LVOL	
820993	ANZA*CAJENE 71 (71503-127D)	231/ENT99	HRW	61.7	61.6	4.9	915	909	1	
820994	ANZA*CAJENE 71 (71503-133D)	231/ENT100	HRW	67.9	69.0	3.3	805	873	4 P-BCRGR	
820995	ANZA*CAJENE 71 (71503-268D)	231/ENT101	HRW	62.7	62.6	3.9	855	849	2 Q-MILLING	
820996	ANZA*CAJENE 71 (71503-300D)	231/ENT102	HRW	58.9	59.2	2.1	840	859	2	
820997	ANZA*CAJENE 71 (71503-354D)	231/ENT103	HRW	63.2	62.7	4.4	1000	969	2	
820998	ANZA*CAJENE 71 (71503-367D)	231/ENT104	HRW	61.0	60.5	2.1	930	899	4 P-BCRGR	

COMMENTS: Selection #103 is outstanding in overall quality. Others that are very promising are #78 and 99. See "REMARKS" for other comments about deficiencies.

P = Poor; Q = Questionable



NURSCO 41

RS, CUN, PUL, &amp; LIND, WA

C.F. KONZAK

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE	BABS
						<u>1/</u>		<u>1/</u>	<u>3/</u>		
820999	MARFED		SWS	62.6	68.3	0.41	81.9	11.0	59.3	3M	58.5
821000	WSMP-4120	<u>5/</u> C1011919	SWS	63.2	71.5	0.41	85.9	11.4	56.6	2M	54.2
821001	FIELDER	<u>*6/</u> C1017268	SWS	62.8	70.1	0.40	84.8	10.5	55.8	1M	52.0
821002	EL GAUCHO/SON	C1017347	SWS	61.6	70.6	0.44	82.7	11.8	57.3	4M	59.3
821003	URQUIE	C1017413	SWS	62.7	71.9	0.41	86.6	11.6	55.4	1M	53.2
821004	DIRKWIN		SWS	60.4	71.6	0.43	85.0	10.3	54.5	1M	52.0
821005	WALLADAY	C1017745	SWS	61.8	69.6	0.42	82.7	10.3	54.7	5M	55.2
821006	OWENS	C1017904	SWS	63.0	69.8	0.40	84.5	10.7	53.7	1M	51.6
821007	WAVERLY	C1017911	SWS	61.8	72.2	0.39	87.9	11.1	55.4	2M	54.7
821008	WARED	C1015926	HRS	63.7	73.0	0.38	89.0	11.7	60.7	4M	62.6
821009	NK755511		HRS	64.0	73.3	0.38	89.0	12.2	61.3	3H	63.7
821010	WAMPUM	C1017691	HRS	62.3	71.5	0.39	86.9	11.5	60.4	3H	62.1
821011	MCKAY	C1017903	HRS	63.0	72.3	0.33	90.5	11.0	60.4	6M	61.6
821012	POTAM70/(WA006021, BRONS/KOELZ-7941	<u>6/</u> WA006916	SWS	62.7	70.2	0.43	83.1	10.7	54.7	2M	55.4
821013	POTAM70/(WA006021, BRONS/KOELZ-7941	WA006917	SWS	62.4	69.5	0.43	81.9	11.0	55.8	3M	57.0
821014	POTAM70/(WA006021, BRONS/KOELZ-7941	WA006918	SWS	62.2	69.6	0.42	82.7	11.0	55.1	3M	56.3
821015	POTAM70/(WA006021, BRONS/KOELZ-7941	WA006919	SWS	62.5	69.3	0.44	81.5	11.0	55.5	3M	56.7
821016	POTAM70/(WA006021, BRONS/KOELZ-7941	WA006920	SWS	62.9	69.8	0.45	81.4	10.7	54.4	3M	55.3
821017	LIFN*2-N1220/POTAM 70 S.12 K76181	<u>6/</u> WA006921	SWS	62.6	70.3	0.45	81.8	11.6	55.3	2M	55.1
821018	ID0118/OASIS/3/5*TWIN/ID0021//PI227196.1	<u>6/</u> ID000232	SWS	60.3	70.0	0.43	82.7	11.4	54.4	2M	53.0
821019	PIONEER 2369	<u>5/</u> PNR02369	HRS	63.4	72.6	0.37	88.9	12.3	61.9	5H	66.9
821020	PIONEER 8751	<u>6/</u> PNR08751	HRS	63.7	72.9	0.36	89.5	11.1	61.4	6M	62.7
821021	PIONEER 9882	PNR09882	HRS	62.7	69.3	0.37	85.3	11.8	61.0	2H	64.0
821022	NK761011	<u>6/</u> NK000751	HRS	62.7	73.3	0.38	89.0	11.8	61.7	4H	64.2
821023	N.AMER. PL. BR. 79400	<u>6/</u> NHS79400	HRS	62.7	73.4	0.40	88.0	11.8	61.1	2H	62.1
821024	N.AMER. PL. BR. 79561	<u>6/</u> NHS79561	HRS	62.2	72.4	0.37	88.6	13.8	61.7	2H	65.7
821025	WRP 8-22	<u>6/</u> WPB00822	HRS	62.5	70.8	0.35	87.8	13.6	63.1	5H	66.9
821026	AIM	<u>6/</u> WPB00903	HRS	63.3	70.3	0.37	86.7	12.3	63.1	4H	66.6
821027	WPB906	<u>6/</u> WPB00906	HRS	62.2	70.8	0.37	87.1	13.4	62.9	5H	66.5
821028	81AS-3012	<u>6/</u> NK790637	SWS	60.5	69.6	0.39	85.0	11.6	56.5	3M	56.8
821029	81AS-3013	<u>5/</u> NK790655	SWS	61.2	73.4	0.43	87.2	11.8	54.9	1H	55.9
821030	SD 8015	<u>6/</u> SD008015	HRS	62.6	70.3	0.39	85.4	12.9	64.4	5H	68.0
821031	WMC 80-2	<u>6/</u> WPB08002	SWS	61.3	73.6	0.40	89.4	12.2	55.8	4M	58.2
821032	WORLD SEED 13	WS000013	SWS	61.8	72.4	0.43	85.6	11.2	55.4	3M	56.8
821033	WVC 9-2	<u>6/</u> WPB09002	SWS	62.9	71.4	0.42	85.0	10.8	55.1	2M	54.1

1/ Observed Values Corrected to 14% Moisture Basis.3/ Absorption at 14% Moisture Corrected to 12% Protein.4/ Observed Values Corrected to 12% Protein.5/ Particularly Promising Overall Quality Characteristics.  
6/ Promising Overall Quality Characteristics.





NURSCO 41

RS, CUN, PUL, &amp; LIND, WA

C. F. KONZAK

LABNUM	VARIETY	IDNO	CLASS	BABSC	MTIME	LVOL	LVOLC	BCRGR	CODI	CODIC	RMKS
											4/
820999	MARFED										
821000	WSMP-4120	CI011919	SWS	59.5	1.8	978	1039	4	8.99	8.89	P-BCRGR
821001	FIELDER	WS-4120	SWS	54.8	1.6	928	964	9	9.38	9.32	P-BCRGR
821002	EL GAUCHO/SON 64/FC/NP63	CI017268	SWS	53.5	1.3	700	790	9	9.40	9.23	P-BCRGR
821003	URQUIE	CI017347	SWS	59.5	3.3	995	1007	2	9.06	9.04	Poss. dual Pur
		CI017413	SWS	53.6	1.6	835	859	9	9.21	9.17	
821004	DIRKWIN										
821005	WALLADAY	CI017745	SWS	53.7	1.3	753	855	9	8.89	8.70	
821006	OWENS	CI017759	SWS	56.9	2.9	900	1002	7	9.10	8.91	
821007	WAVERLY	CI017904	SWS	52.9	1.8	823	901	9	9.29	9.14	
821008	WARED	CI017911	SWS	55.6	1.5	940	994	6	9.25	9.15	
		CI015926	HRS	62.9	3.3	1090	1109	2	8.62	8.60	
821009	NK755511										
821010	WAMPUM	NK755511	HRS	63.5	3.0	1140	1128	2	8.41	8.43	
821011	MCKAY	CI017691	HRS	62.6	2.9	1100	1131	2	8.89	8.85	
821012	POTAM70/(WA006021, BRONS/KOELZ-7941	CI017903	HRS	62.6	4.0	1080	1142	2	8.79	8.71	
821013	POTAM70/(WA006021, BRONS/KOELZ-7941	WA006916	SWS	56.7	2.2	980	1058	4	9.19	9.04	Q-FYELD
		WA006917	SWS	58.0	2.5	1050	1110	3	9.17	9.06	P-FYELD, Poss.
821014	POTAM70/(WA006021, BRONS/KOELZ-7941										
821015	POTAM70/(WA006021, BRONS/KOELZ-7941	WA006918	SWS	57.3	2.4	1015	1075	3	9.15	9.04	P-FYELD, PDP
821016	POTAM70/(WA006021, BRONS/KOELZ-7941	WA006919	SWS	57.7	2.2	1045	1105	3	9.11	9.00	P-FYELD, PDP
821017	LIFN#2-N1220/POTAM 70 S.12 K76181	WA006920	SWS	56.6	2.6	1005	1083	3	9.21	9.07	P-FYELD, PDP
821018	ID0118/OASIS/3/5*TWIN/ID0021//PI227196..	WA006921	SWS	55.5	2.0	958	982	7	9.17	9.13	Q-MSCOR
		ID000232	SWS	53.6	1.5	785	821	9	9.01	8.95	Q-MSCOR
821019	PIONEER 2369										
821020	PIONEER 8751	PNR02369	HRS	66.6	5.7	1148	1129	1	8.39	8.41	
821021	PIONEER 9882	PNR08751	HRS	63.6	3.9	1060	1116	3	8.76	8.69	Q-BCRGR
821022	NK761011	PNR09882	HRS	64.2	2.1	1045	1057	3	8.30	8.28	P-FYELD
821023	N.AMER. PL. BR. 79400	NK000751	HRS	64.4	3.3	1120	1132	2	8.36	8.35	
		NHS79400	HRS	62.3	2.2	1080	1092	1	8.44	8.42	
821024	N.AMER. PL. BR. 79561										
821025	WRP 8-22	NHS79561	HRS	63.9	2.3	1095	983	2	8.36	8.51	NOTE: high prot.
821026	AIM	WPB00822	HRS	65.3	3.7	1180	1081	2	8.27	8.40	Q-FYELD
821027	WPB906	WPB00903	HRS	66.3	2.9	1060	1041	2	8.16	8.19	Q-FYELD&LVOL
821028	81AS-3012	WPB00906	HRS	65.1	3.8	1175	1088	2	8.27	8.39	Q-FYELD
		NK790637	SWS	57.2	2.6	953	977	3	9.14	9.09	
821029	81AS-3013										
821030	SD 8015	NK790655	SWS	56.1	1.3	930	942	6	8.91	8.89	
821031	WWC 80-2	SD008015	HRS	67.1	4.0	1135	1079	2	8.27	8.35	Q-FYELD
821032	WORLD SEED 13	WPB08002	SWS	58.0	3.6	1015	1003	2	8.95	8.97	Q-LVOL
821033	WWC 9-2	WS000013	SWS	57.6	2.3	865	913	9	8.32	8.24	P-LVOL&CODI
		WPB09002	SWS	55.3	1.0	850	922	9	9.19	9.06	

## COMMENTS:

Equal amounts of seed were composited from nurseries grown at Royal Slope, Cunningham, Pullman, and Lind, WA. Several of these commercial company selections have promising milling and baking quality for their class of wheat (either HRS or SWS). CI017347 appears to have some potential as a dual purpose soft white spring wheat. Note deficiencies and weaknesses for the selections in the Remarks Column.



NURSCO 41

RS, CUN, PUL, & LIND, WA

C. F. KONZAK

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE	BABS
821034 WWC 9-4		<u>6</u> /WPB09004	SWS	62.5	70.7	<u>1</u> /	85.5	10.9	55.7	2M	54.8
						<u>1</u> /		<u>1</u> /	<u>3</u> /		



USDA, SEA AR  
WESTERN WHEAT QUALITY LAB.  
PULLMAN, WA.

NURSCO 41

RS, CUN, PUL, & LIND, WA

C. F. KONZAK

COMMERCIAL SPRING VARIETIES

CONTD. PAGE 2

LABNUM	VARIETY	IDNO	CLASS	BABSC	MTIME	LVOL	LVOLC	BCRGR	CODI	CODIC	RMKS
				<u>3/</u>			<u>4/</u>			<u>4/</u>	
821034 WWC 9-4		WPB09004	SWS	55.9	1.4	935	1001	6	9.11	8.99	

P = Poor Q = Questionable PDP = Possible Dual Purpose



NURSCO 42

PENDLETON, OR

C.R. ROHDE

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	MTYPE	BABS
821035	TWIN	C1014588	SWS	60.4	71.7	0.47	82.2	10.5	52.3	1M	
821036	CRESTONE, ID0105	C1017858	SWS	60.1	71.9	0.47	82.8	10.5	51.1	1M	
821037	DIRKWIN	C1017745	SWS	59.1	71.6	0.46	83.1	9.9	49.8	1H	
821038	K71051/WA5949	6/WA6749	HRS	60.0	72.4	0.44	85.1	11.1	57.8	3M	60.1
821039	BORAH/3/11-60-101//TZPP/SN64	6/ID0153	HRS	62.0	72.8	0.38	88.5	12.3	57.9	2H	62.4
821040	URQUIE	C1017413	SWS	62.2	72.7	0.43	86.1	10.5	51.1	1H	
821041	WALLADAY	C1017759	SWS	60.6	70.8	0.44	83.4	10.1	51.8	3M	
821042	BORAH/3/11-60-101//TZPP/SN64	6/ID0134	HRS	61.7	73.3	0.37	89.6	13.1	59.7	3H	64.0
821043	C114482/K6202578R21 (Waverly, C117911)	6/WA6402	SWS	61.2	73.5	0.45	86.0	10.8	53.1	2M	
821044	HYSLOP/FIELDER	ID0172	SWS	59.9	69.7	0.45	80.9	10.8	49.8	1H	
821045	BORAH	C1017267	HRS	62.6	73.2	0.34	91.3	12.7	58.9	2H	60.3
821046	OWENS	C1017904	SWS	63.0	70.8	0.40	85.7	9.6	52.5	2M	
821047	FIELDWIN	C1017425	SWS	63.3	71.1	0.37	87.8	10.2	51.6	1M	
821048	WAMPUM	C1017691	HRS	60.2	72.4	0.42	86.1	11.8	59.8	3H	60.8
821049	WARED	C1015926	HRS	62.2	75.9	0.47	87.1	12.4	55.8	2H	58.4
821050	PROSPUR	C1017408	HRS	63.6	76.8	0.43	90.1	11.9	57.7	3H	61.8
821051	MCKAY	C1017903	HRS	63.1	76.0	0.44	88.6	11.6	55.5	3M	58.3
821052	FIEDLER	C1017268	SWS	62.2	70.5	0.42	84.3	10.5	51.1	1M	
821053	FEDERATION	C1004734	SWS	61.3	69.9	0.42	83.4	10.7	52.5	2M	
821054	YECORA ROJO		HRS	62.7	73.3	0.40	88.0	14.1	60.7	4H	66.0

1/ Observed Values Correct to 14% Moisture Basis.3/ Absorption at 14% Moisture Corrected to 11% Protein.4/ Observed Values Corrected to 11% Protein.5/

Particularly Promising Overall Quality Characteristics.

6/ Promising Overall Quality Characteristics.





NURSCO 42

PENDLETON, OR

C.R. ROHDE

LABNUM	VARIETY	IDNO	CLASS	BABSC	MTIME	LVOL	LVOLC	BCRGR	CODI	CODIC	RMKS
				3/			4/			4/	
821035	TWIN		SWS						9.47	9.40	
821036	CRESTONE, ID0105	C1014588	SWS						9.20	9.14	
821037	DIRKWIN	C1017745	SWS						8.97	8.85	
821038	K71051/WA5949	WA6749	HRS	60.0	2.6	1080	1074	2			
821039	BORAH/3/11-60-101//TZPP/SN64	ID0153	HRS	61.1	2.5	1100	1019	2			
821040	URQUIE		SWS						9.26	9.21	
821041	WALLADAY	C1017759	SWS						9.29	9.19	
821042	BORAH/3/11-60-101//TZPP/SN64	ID0134	HRS	61.9	3.1	1160	1030	2			
821043	C114482/K6202578R21	WA6402	SWS						9.04	9.02	
821044	HYSLOP/FIELDER	ID0172	SWS						9.27	9.25	Poor Flour Yield
821045	BORAH	C1017267	HRS	58.6	1.7	1158	1053	2			
821046	OWENS	C1017904	SWS						9.60	9.45	
821047	FIELDWIN	C1017425	SWS						9.42	9.34	
821048	WAMPUM	C1017691	HRS	60.0	3.1	1078	1028	2			
821049	WARED	C1015926	HRS	57.0	2.5	1118	1031	3			
821050	PROSPUR	C1017408	HRS	60.9	3.3	1110	1054	1			
821051	MCKAY	C1017903	HRS	57.7	2.6	1060	1023	2			
821052	FIEDLER	C1017268	SWS						9.07	9.02	
821053	FEDERATION		SWS						9.07	9.04	
821054	YECORA ROJO	C1004734	HRS	62.9	4.1	1175	983	2			

COMMENTS: Only a few of these are experimental wheats, and all were acceptable in quality with the exception of ID172 which was poor in flour yield.



NURSCO 43

MORO, OR

C.R. ROHDE

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE	BABS
						1/		1/	3/		
821055	TWIN	C1014588	SWS	60.8	69.3	0.48	78.7	11.7	52.9	1H	
821056	K71051/WA5949	WA6749	HRS	61.9	71.7	0.45	84.0	11.2	58.3	3M	59.7
821057	URQUIE	C1017413	SWS	64.1	71.5	0.44	84.2	10.4	54.0	1H	
821058	MCKAY	C1017903	HRS	63.0	73.2	0.37	89.7	12.4	60.9	3H	60.5
821059	FBR/5BB 11/4/7*SFL/3/AS/FR//A63167S... 6/ ID0236		SWS	62.1	70.2	0.43	83.2	11.1	53.8	1H	
821060	DIRKWIN	C1017745	SWS	59.8	69.0	0.45	80.4	11.5	52.4	1M	
821061	BORAH/3/11-60-101//TZPP/SN64	ID0153	HRS	62.4	71.5	0.38	86.9	12.9	61.4	2H	64.0
821062	WALLADAY	C1017759	SWS	61.6	69.1	0.45	80.7	11.2	54.6	3M	
821063	FIELDER	C1017268	SWS	63.0	69.8	0.39	85.3	11.1	52.3	1H	
821064	WARED	C1015926	HRS	63.9	73.7	0.45	86.0	12.9	60.1	3M	61.7
821065	OWENS	C1017904	SWS	63.4	69.4	0.42	82.5	10.7	52.6	2M	
821066	FIELDWIN	C1017425	SWS	63.4	71.2	0.40	86.3	11.6	51.8	1H	
821067	C114482/K6202578R21 (Waverly,C117911)	WA6402	SWS	62.1	70.2	0.43	83.1	11.5	52.7	1H	
821068	BORAH	C1017267	HRS	63.3	72.3	0.36	89.1	13.5	59.6	2H	62.3
821069	SHASTA	C1017651	HRS	64.5	70.4	0.39	85.3	12.6	60.7	2H	61.5
821070	FEDERATION	C1004734	SWS	61.6	68.2	0.46	78.4	12.4	53.2	1H	
821071	WAMPUM	C1017691	HRS	60.6	70.8	0.47	81.6	12.7	60.5	2H	60.4
821072	PROSPUR	C1017408	HRS	64.5	73.8	0.40	88.3	12.9	61.3	3H	64.4
821073	FORTUNA	C1013596	HRS	63.0	72.4	0.44	84.9	14.9	60.6	2H	65.2
821074	YECORA ROJO		HRS	64.4	72.0	0.40	86.9	14.3	61.8	3H	65.3

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 12% Protein.

4/ Observed Values Corrected to 12% Protein.

5/

Particularly Promising Overall Quality Characteristics.

6/

Promising Overall Quality Characteristics.



NURSCO 43

MORO, OR

C.R. ROHDE

LABNUM	VARIETY	IDNO	CLASS	BABSC 3/	MTIME	LVOL	LVOLC 4/	BCRGR	CODI	CODIC 4/	RMKS
821055	TWIN	C1014588	SWS						9.06	9.02	POOR BCRGR
821056	K71051/WA5949	WA6749	HRS	60.5	2.3	1030	1080	6	9.24	9.06	
821057	URQUIE	C1017413	SWS								
821058	MCKAY	C1017903	HRS	60.1	3.8	1140	1115	3	9.05	8.95	
821059	FBR/5BB 11/4/7*SFL/3/AS/FR//A63167S...	ID0236	SWS								
821060	DIRKWIN	C1017745	SWS						8.94	8.88	
821061	BORAH/3/11-60-101//TZPP/SN64	ID0153	HRS	63.1	2.7	1150	1094	4	9.06	8.97	Q-BCRGR
821062	WALLADAY	C1017759	SWS						9.24	9.14	
821063	FIELDER	C1017268	SWS								
821064	WARED	C1015926	HRS	60.8	2.0	1150	1094	2			
821065	OWENS	C1017904	SWS						9.34	9.19	
821066	FIELDOWN	C1017425	SWS						8.95	8.91	
821067	C114482/K6202578R21	WA6402	SWS	60.8	1.6	1145	1052	2	9.04	8.98	
821068	BORAH	C1017267	HRS	60.9	1.9	1085	1048	2			
821069	SHASTA	C1017651	HRS								
821070	FEDERATION	C1004734	SWS						8.81	8.86	
821071	WAMPUM	C1017691	HRS	59.7	2.4	1100	1057	2			
821072	PROSPUR	C1017408	HRS	63.5	3.4	1120	1064	1			
821073	FORTUNA	C1013596	HRS	62.3	1.8	1230	1044	2			
821074	YECORA ROJO		HRS	63.0	2.6	1250	1107	2			

COMMENTS: ID236 appears equal to or better than Fielder or Owens in milling properties and was scored acceptable even though it is slightly low in flour yield.





NURSCO 44

R.S., PULLMAN, WA

C.F. KONZAK

LABNUM	VARIETY	IDNO	CLASS	LVOL	LVOLC	BCRGR	CODI	CODIC	CAVOL	SCSOR	WTIN	NOSCO	RMKS
					4/			4/					
821075	POTAM 70/(WA006021, BRONS)	K7905096	SWS	1045	1069	2	8.75	8.71	1320	75.0	368	68	Q-NOSCO
821076	WA6171/(CI014588, TWIN) S	K7905651	SWS	1010	1004	2	8.59	8.60	1280	71.0	367	74	Q-FYELD, SCSOR
821077	K74130/POTAM 70	K8005355	SWS	1060	1090	1	8.64	8.58	1305	72.0	373	74	Q-FYELD
821078	IFN*2-N1220/POTAM 70 S.	K7905549	SWS	970	994	2	8.72	8.68	1310	75.0	367	66	Q-NOSCO
821079	CI014072/(CI015826, WARED	K8005223	SWS	968	1004	2	8.82	8.76	1315	75.0	351	71	
821080	K74182/POTAM 70	K8005604	SWS	1050	1050	2	8.82	8.82	1290	78.0	377	74	
821081	K74135/POTAM 70	K8005424	SWS	993	1017	2	8.86	8.82	1310	75.0	368	72	
821082	K74322/POTAM 70	K8005705	SWS	1015	997	2	8.69	8.72	1250	71.0	373	69	Q-SCSOR, NOSCO
821083	K74322/POTAM 70	K8005701	SWS	965	995	3	8.54	8.49	1285	73.0	373	72	Q-BCRGR, CODI
821084	URQUIE	CI17413	SWS	970	1030	4	8.76	8.65	1275	74.0	379	64	P-BCRGR, NOSCO
821085	WAMPUM	CI17691	HRS	1018	962	2	8.54	8.61	1175	65.0	373	66	Q-NOSCO
821086		K7905202	SWS	1018	1066	2	8.80	8.71	1300	76.0	389	78	Q-FYELD
821087		K7905171	SWS	1008	1056	2	8.81	8.72	1255	74.0	394	79	Q-FYELD

COMMENTS:

Samples analyzed were made of a blend of equal parts from nurseries grown at Royal Slope (R.S.) and Pullman, WA. All but K8005701 have some overall promise. Areas of weakness appear in milling flour yield, water absorption for bread doughs, and in noodle score (NOSCO). The most promising selection is K8005604 followed by K8005424. See "REMARKS" for other deficiencies.



NURSCO 44

R.S., PULLMAN, WA

C.F. KONZAK

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE	BABS	BABSC	MTIME
						<u>1/</u>		<u>1/</u>	<u>3/</u>			<u>3/</u>	
821075	POTAM 70/(WA006021, BRONS)	6/K7905096	SWS	61.3	69.8	0.35	84.0	10.6	60.5	6M	59.3	59.7	3.2
821076	WA6171/(C1014588, TWIN) S	6/K7905651	SWS	60.7	68.6	0.35	82.3	11.1	59.5	6M	58.8	58.7	3.5
821077	K74130/POTAM 70	6/K8005355	SWS	62.4	68.9	0.36	80.5	10.5	59.9	6M	57.1	57.6	3.2
821078	IFN*2-N1220/POTAM 70 S.	6/K7905549	SWS	60.4	70.1	0.37	82.2	10.6	58.1	4M	55.9	56.3	3.4
821079	C1014072/(C1015826, WARE)	5/K8005223	SWS	61.5	70.5	0.34	85.7	10.4	59.3	6M	57.4	58.0	3.7
821080	K74182/POTAM 70	*5/K8005604	SWS	62.9	70.3	0.32	86.0	11.0	61.3	6M	57.5	57.5	3.3
821081	K74135/POTAM 70	*5/K8005424	SWS	62.7	72.2	0.33	89.0	10.6	60.2	7M	58.0	58.4	4.0
821082	K74322/POTAM 70	6/K8005705	SWS	61.2	70.7	0.40	82.9	11.3	59.5	4H	58.5	58.2	3.6
821083	K74322/POTAM 70	K8005701	SWS	61.7	71.6	0.37	85.4	10.5	59.2	6M	56.9	57.4	3.1
821084	URQUIE	C117413	SWS	63.6	71.6	0.36	86.1	10.0	61.3	2M	54.5	55.5	1.1
821085	WAMPUM	6117691	HRS	62.5	70.5	0.37	85.5	11.9	63.2	4H	61.8	60.9	3.0
821086		6/K7905202	SWS	63.6	68.9	0.39	81.1	10.2	61.1	3M	57.5	58.3	2.4
821087		5/K7905171	SWS	63.5	69.9	0.38	81.3	10.2	60.4	4M	57.3	58.1	3.3

1/ Observed Values Corrected to 14% Moisture Basis.3/ Absorption at 14% Moisture Corrected to 11% Protein.4/ Observed Values Corrected to 11% Protein.

5/

Particularly Promising Overall Quality Characteristics.

6/ Promising Overall Quality Characteristics.



NURSCO 45

CORVALLIS, OR

W.E. KRONSTAD

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE	BABS
						I/		I/	3/		
821088	MCKAY	82	SPHRA 1	HRS	65.2						
821089	SHASTA	82	SPHRA 2	HRS	64.8	0.39	86.2	10.9	61.0	4M	64.5
821090	ANZA	82	SPHRA 3	HRS	66.0	0.37	88.7	10.0	58.3	2M	60.9
821091	BORAH	82	SPHRA 4	HRS	64.8	0.36	90.6	11.1	60.3	4H	65.0
821092		6/	82	SPHRA 5	SWS	0.38	88.9	8.6	55.0	2M	53.2
821093		6/	82	SPHRA 6	HRS	0.36	89.8	9.8	58.2	6M	60.6
821094		6/	82	SPHRA 7	HWS	0.39	87.6	10.9	61.1	4H	64.6
821095		6/	82	SPHRA 8	HWS	0.36	87.5	9.5	61.8	8M	64.9
821096		6/	82	SPHRA 9	HRS	0.36	87.6	10.7	62.0	4H	65.8
821097		5/	82	SPHRA 10	HRS	0.35	90.2	10.1	61.6	3H	64.8
821098		6/	82	SPHRA 11	HRS	0.41	83.4	9.2	59.3	4M	61.1
821099		6/	82	SPHRA 12	SRS	0.42	88.2	8.6	52.7	3L	53.4
821100		5/	82	SPHRA 13	SRS	0.39	81.7	8.9	54.1	3L	54.6
821101		5/	82	SPHRA 14	SRS	0.42	88.8	9.1	51.3	3L	53.0
821102		5/	82	SPHRA 15	HRS	0.37	86.3	8.9	59.8	3M	62.3
821103		82	SPHRA 16	HRS	63.6	0.38	82.9	9.0	58.7	3M	60.3
821104		82	SPHRA 17	HRS	64.0	0.43	83.0	8.7	57.6	3M	60.9
821105		82	SPHRA 18	HRS	63.2	0.43	83.4	9.4	54.8	1M	57.8
821106		82	SPHRA 19	SRS	64.0	0.41	82.2	8.6	54.2	3M	55.4
821107		82	SPHRA 20	SRS	64.8	0.37	83.1	8.3	55.2	2M	57.1
821108		5/	82	SPHRA 21	HRS	0.36	89.7	9.7	59.0	6M	62.3
821109		6/	82	SPHRA 22	HRS	0.40	84.6	10.4	60.6	8M	64.6
821110		6/	82	SPHRA 23	HRS	0.37	87.0	10.3	60.9	4H	66.8
821111		82	SPHRA 24	HRS	64.4	0.43	83.8	9.7	59.3	2H	63.1
821112		5/	82	SPHRA 25	HRS	0.36	89.0	10.5	59.7	4M	63.3
821113		82	SPHRA 26	HRS	64.4	0.42	84.9	9.3	58.6	2H	61.5
821114		82	SPHRA 27	HRS	64.8	0.44	83.3	9.6	59.8	2H	63.0
821115		6/	82	SPHRA 28	HRS	0.42	84.7	11.2	59.5	2H	63.3
821116		82	SPHRA 29	HRS	64.4	0.43	85.4	10.1	57.9	2H	59.1
821117		82	SPHRA 30	HRS	64.8	0.43	85.7	10.2	58.5	2H	60.3
821118		5/	82	SPHRA 31	HRS	0.40	87.2	11.1	61.8	3H	65.5
821119		6/	82	SPHRA 32	HRS	0.40	85.5	10.7	61.5	8M	66.8
821120		82	SPHRA 33	HRS	65.2	0.40	84.7	10.6	59.9	4M	64.6
821121		82	SPHRA 34	HRS	65.6	0.38	85.1	10.7	59.5	3M	64.8
821122		6/	82	SPHRA 35	HRS	0.41	86.1	11.0	58.7	3H	64.8

1/ Observed Values Corrected to 14% Moisture Basis.

5/ Particularly Promising Overall Quality Characteristics.

3/ Absorption at 14% Moisture Corrected to 10% Protein.

6/ Promising Overall Quality Characteristics.

4/ Observed Values Corrected to 10% Protein.









NURSCO 45

CORVALLIS, OR

W.E. KRONSTAD

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	MTYPE	BABS
821123		<u>5/</u> 82SPHRA 36	HRS	64.4	72.0	0.38	87.6	11.2	60.8	5H	64.6
821124		82SPHRA 39	HRS	64.0	68.9	0.39	84.2	10.6	61.3	4H	66.5
821125		82SPHRA 40	HRS	66.8	69.9	0.35	87.2	9.0	58.3	6M	61.4
821126		82SPHRA 41	HRS	65.2	69.3	0.39	84.3	10.7	58.8	3M	64.1
821127		<u>5/</u> 82SPHRA 42	HRS	65.2	72.8	0.36	89.8	10.2	58.7	7M	62.5
821128		82SPHRA 43	HRS	64.0	72.5	0.42	86.3	10.8	57.7	1H	60.1
821129		<u>6/</u> 82SPHRA 44	HRS	65.6	73.4	0.37	89.7	11.6	56.7	6M	62.9



NURSCO 45

CORVALLIS, OR

W.E. KRONSTAD

LABNUM	VARIETY	IDNO	CLASS	BABSC 3/	MTIME	LVOL	LVOLC 4/	BCRGR	CODI	CODIC 4/	RMKS
821123		82SPHRA 36	HRS	63.4	4.5	1005	931	1			P-FYELD
821124		82SPHRA 39	HRS	65.9	3.4	955	918	2			P-BCRGR
821125		82SPHRA 40	HRS	62.4	3.8	785	847	6			P-BCRGR
821126		82SPHRA 41	HRS	63.4	2.7	855	812	7			
821127		82SPHRA 42	HRS	62.3	3.6	935	923	2			
821128		82SPHRA 43	HRS	59.3	1.2	890	840	6			P-LVOL&BCRGR
821129		82SPHRA 44	HRS	61.3	4.1	918	819	3			Q-LVOL&BCRGR

COMMENTS: Note that several of these selections are soft in texture and performed as soft wheats in the cookie test. Others were judged as hard whites (HWS). There is a wide range of qualities among these HRS selections, from very good to very poor.

VP = Very Poor, P = Poor, Q = Questionable



NURSCO 46

MORO/KASEBERG FARM

W.E. KRONSTAD

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	MTYPE
821130	MCKAY	82SPHRA1	HRS	64.0	72.9	0.34	90.7	11.0	62.5	3H
821131	SHASTA	82SPHRA2	HRS	64.4	70.4	0.35	87.5	12.1	63.9	2H
821132	ANZA	82SPHRA3	HRS	64.4	72.2	0.36	88.7	11.5	62.5	1H
821133	BORAH	82SPHRA4	HRS	63.2	72.4	0.32	91.1	12.8	63.0	2H
821134		82SPHRA5	SWS	63.2	70.4	0.35	88.3	9.8	56.8	2M
821135		6/82SPHRA7	HWS	62.8	71.7	0.39	86.6	12.1	65.3	5H
821136		82SPHRA8	HWS	63.2	70.7	0.37	86.8	11.5	66.2	5H
821137		82SPHRA9	HRS	64.4	70.1	0.33	88.2	11.7	66.3	4H
821138		82SPHRA11	HRS	60.8	68.4	0.40	82.7	11.4	61.4	3M
821139		6/82SPHRA12	SRS	62.4	71.4	0.41	85.7	10.6	58.9	3M
821140		82SPHRA13	SRS	61.6	66.5	0.36	82.8	10.0	60.3	1H
821141		6/82SPHRA14	SRS	62.8	72.3	0.39	88.6	10.9	59.0	3M
821142		82SPHRA15	HRS	62.4	67.9	0.37	83.8	11.2	64.5	2H
821143		82SPHRA16	HRS	61.6	64.6	0.36	81.3	10.5	63.9	3M
821144		82SPHRA17	HRS	62.4	66.3	0.36	82.8	10.5	63.9	2H
821145		82SPHRA18	SRS	62.0	70.0	0.41	84.2	9.7	63.1	1H
821146		82SPHRA19	SRS	61.6	67.2	0.37	83.2	9.5	62.4	2M
821147		82SPHRA20	SRS	62.0	66.9	0.37	82.5	9.6	60.8	3M
821148		82SPHRA22	HRS	60.0	68.4	0.41	82.5	12.2	64.2	5H
821149		6/82SPHRA23	HRS	65.2	68.9	0.33	86.9	11.5	66.0	4H
821150		82SPHRA24	HRS	62.0	68.6	0.43	81.5	10.3	64.5	3M
821151		82SPHRA26	HRS	62.0	71.1	0.46	82.8	10.5	62.7	1H
821152		82SPHRA27	HRS	63.2	69.5	0.43	82.4	11.0	63.9	2H
821153		82SPHRA29	HRS	62.4	70.6	0.43	83.6	10.9	63.7	1H
821154		5/82SPHRA31	HRS	64.4	72.0	0.39	87.1	11.6	66.6	3H
821155		6/82SPHRA32	HRS	65.2	69.6	0.35	86.7	12.4	65.5	4H
821156		6/82SPHRA33	HRS	63.2	70.0	0.39	85.0	12.2	65.0	2H
821157		82SPHRA34	HRS	64.0	69.5	0.34	87.3	12.7	59.7	3M
821158		82SPHRA35	HRS	63.2	71.6	0.39	86.9	11.5	65.9	3H
821159		5/82SPHRA36	HRS	62.4	72.6	0.37	88.6	11.7	66.2	5H
821160		6/82SPHRA37	HRS	63.6	67.7	0.40	82.2	11.1	64.8	3H
821161		82SPHRA38	HRS	63.6	71.3	0.40	86.0	11.4	62.5	3H
821162		6/82SPHRA39	HRS	63.6	70.5	0.39	85.8	12.1	66.9	4H
821163		82SPHRA40	HRS	64.8	70.5	0.34	88.1	11.0	62.5	4M
821164		82SPHRA41	HRS	64.0	69.4	0.41	83.6	11.6	61.4	2H





NURSCO 46

MORO/KASEBERG FARM

W.E. KRONSTAD

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR	RMKS
					3/			4/		
821130	MCKAY	82SPHRA1	HRS	62.7	62.7	4.4	1058	1058	2	
821131	SHASTA	82SPHRA2	HRS	65.2	64.1	2.1	1028	960	2	
821132	ANZA	82SPHRA3	HRS	61.2	60.7	1.4	928	898	8	
821133	BORAH	82SPHRA4	HRS	63.0	61.2	2.2	1080	968	1	
821134		82SPHRA5	SWS	51.8	53.0	1.0	818	890	8	P-LVOL&BCRGR
821135		82SPHRA7	HWS	66.6	65.5	3.7	1045	977	3	HARD WHITE??
821136		82SPHRA8	HWS	67.9	67.4	4.8	1040	1009	2	Q-FYELD-HW??
821137		82SPHRA9	HRS	68.2	67.5	3.7	1040	997	4	Q-FYELD&BCRGR
821138		82SPHRA11	HRS	63.0	62.6	2.8	973	948	3	P-FYELD&Q-BCRGR
821139		82SPHRA12	SRS	55.7	56.1	2.1	995	1019	2	(soft textured)
821140		82SPHRA13	SRS	56.5	57.5	1.4	830	890	VP-BCRGR	VP-FYELD, LVOL
821141		82SPHRA14	SRS	55.1	55.2	2.0	1013	1019	2	(soft textured)
821142		82SPHRA15	HRS	65.4	65.2	1.8	1013	100	P-BCRGR	3 P-FYELD, MTIME
821143		82SPHRA16	HRS	63.6	64.1	1.5	1070	1101	5	P-FYELD&BCRGR
821144		82SPHRA17	HRS	63.6	64.1	1.4	975	1006	P-FYELD	3 P-MTIME&BCRGR
821145		82SPHRA18	SRS	61.0	62.3	1.1	785	863	VP-BCRGR	VP-MTIME, LVOL
821146		82SPHRA19	SRS	58.1	59.6	1.0	975	1065	P-BCRGR	5 P-FYELD, MTIME
821147		82SPHRA20	SRS	57.6	59.0	1.5	950	1034	P-BCRGR	4 P-FYELD, MTIME
821148		82SPHRA22	HRS	67.6	66.4	5.1	1090	1016	2	P-milling, G-BAKING
821149		82SPHRA23	HRS	69.2	68.7	4.2	1075	1044	2	
821150		82SPHRA24	HRS	65.0	65.7	2.0	1015	1058	3	Q-MILLING&BAKING
821151		82SPHRA26	HRS	62.4	62.9	1.6	970	1001	8	P-MTIME&BCRGR
821152		82SPHRA27	HRS	65.1	65.1	1.8	1035	1035	2	Q-MILLING&MTIME
821153		82SPHRA29	HRS	61.8	61.9	1.1	975	981	2	Q-MILLING&MTIME
821154		82SPHRA31	HRS	66.9	66.3	3.0	1095	1058	2	
821155		82SPHRA32	HRS	68.1	66.7	4.0	1170	1083	2	
821156		82SPHRA33	HRS	67.4	66.2	2.6	1025	951	3	Q-BCRGR
821157		82SPHRA34	HRS	65.1	63.4	2.8	880	775	6	VP-LVOL&BCRGR
821158		82SPHRA35	HRS	65.6	65.1	2.8	1065	1034	2	
821159		82SPHRA36	HRS	69.1	68.4	6.2	1075	1032	2	
821160		82SPHRA37	HRS	68.1	68.0	3.8	1045	1039	2	Q-FYELD
821161		82SPHRA38	HRS	64.1	63.7	3.2	1060	1035	2	
821162		82SPHRA39	HRS	70.2	69.1	3.7	1058	990	2	
821163		82SPHRA40	HRS	65.7	65.7	3.1	925	925	5	P-LVOL&BCRGR
821164		82SPHRA41	HRS	65.2	64.6	2.5	955	918	Q-BCRGR	4 Q-FYELD, LVOL



NURSCO 46

MORO/KASEBERG FARM

W.E. KRONSTAD

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE
						<u>1/</u>		<u>1/</u>	<u>3/</u>	
821165		82SPHRA42	HRS	63.2	71.9	0.37	88.3	11.9	64.0	3H
821166		82SPHRA43	HRS	62.4	71.3	0.44	83.9	10.7	62.2	2H



NURSCO 46

MORO/KASEBERG FARM

W.E. KRONSTAD

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR	RMKS
					<u>3/</u>			<u>4/</u>		
821165		82SPHRA42	HRS	67.1	66.2	3.2	1105	1049		3 Q-BCRGR
821166		82SPHRA43	HRS	62.6	62.9	1.1	995	1014		6 P-MTIME&BCRGR

1/ Observed Values Corrected to 14% Moisture Basis.3/ Absorption at 14% Moisture Corrected to 11% Protein. 5/ Particularly Promising Overall Quality Characteristics.4/ Observed Values Corrected to 11% Protein. 6/ Promising Overall Quality Characteristics.

COMMENTS: Note that selections 82SPHRA7 is a hard white spring and No's. 12 and 14 are soft red. They are footnoted as acceptable in overall quality but would not fit a PNW market class.

Q = Questionable, VP = Very Poor, P = Poor



NURSCO 47

CORVALLIS, OR

W.E. KRONSTAD

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE	CODI	CODIC	RMKS
						I/		I/				4/	
821167	OWENS	82SPSWA1	SWS	64.4	70.1	0.48	80.0	9.1	57.3	2M	9.47	9.38	
821168	TWIN	82SPSWA2	SWS	61.6	70.4	0.41	84.6	8.7	55.6	2M	9.39	9.19	
821169	FIELDER	82SPSWA3	SWS	64.4	69.9	0.37	86.6	9.6	57.9	1M	9.37	9.33	
821170	FIELDWIN	82SPSWA4	SWS	64.0	71.1	0.38	87.7	9.0	58.3	1M	9.30	9.19	P-CODI
821171		82SPSWA5	HWS	63.6	73.3	0.39	88.5	10.6	64.6	6H	8.56	8.61	P-CODI
821172		82SPSWA6	HWS	62.8	70.2	0.40	84.9	11.3	63.1	4H	8.54	8.64	P-CODI
821173		82SPSWA7	HWS	63.6	71.3	0.39	86.2	11.5	62.5	4H	8.75	8.87	P-CODI
821174		82SPSWA8	HWS	62.4	70.2	0.42	83.7	11.7	63.0	2H	8.54	8.67	P-CODI
821175		6/ 82SPSWA9	SWS	63.6	71.1	0.43	84.5	10.4	61.1	2H	9.02	9.07	
821176		6/ 82SPSWA10	HWS	63.2	72.1	0.38	88.0	11.4	62.9	3H	8.92	9.04	
821177		82SPSWA11	HWS	64.8	71.4	0.38	87.2	9.4	64.8	5H	8.17	8.13	P-CODI
821178		82SPSWA12	SWS	64.4	66.2	0.38	81.1	9.9	61.0	3M	8.76	8.75	P-FYELD, Q-CODI
821179		82SPSWA13	SWS	61.2	65.7	0.40	79.6	9.2	58.1	2M	9.09	9.00	P-FYELD
821180		6/ 82SPSWA14	SWS	63.2	70.0	0.35	87.7	9.1	58.2	7M	9.25	9.15	
821181	BOLLILLO	6/ 82SPSWA15	SWS	61.2	70.0	0.41	84.2	8.9	59.1	7M	8.95	8.83	Q-CODI
821182		82SPSWA16	HWS	63.2	71.2	0.39	86.4	9.6	61.7	3M	8.90	8.87	Q-CODI
821183		82SPSWA17	HWS	62.8	71.3	0.44	84.0	9.8	62.1	2M	8.87	8.86	Q-CODI
821184		82SPSWA18	HWS	63.6	68.8	0.41	82.6	9.5	62.5	4M	8.31	8.27	P-CODI
821185		82SPSWA19	HWS	65.6	72.6	0.36	89.3	9.7	62.1	8M	8.60	8.58	P-CODI
821186		82SPSWA20	HWS	65.6	71.8	0.34	89.5	10.1	60.7	8M	8.59	8.60	P-CODI
821187		82SPSWA21	HWS	64.0	73.3	0.46	84.8	9.7	65.2	2H	8.44	8.41	P-CODI
821188		82SPSWA22	HWS	61.6	70.0	0.42	83.3	9.7	65.1	6H	8.45	8.43	P-CODI
821189		82SPSWA23	SWS	63.2	67.4	0.39	81.8	9.7	62.3	6M	9.02	8.99	P-FYELD
821190		82SPSWA24	SWS	63.2	67.4	0.39	82.0	9.4	61.6	6M	8.99	8.92	P-FYELD
821191		6/ 82SPSWA25	SWS	65.6	71.2	0.38	87.3	9.0	59.5	6M	9.21	9.10	
821192	PAVON 76	82SPSWA26	HWS	64.4	69.5	0.36	85.9	9.4	65.5	7M	8.27	8.23	P-CODI
821193		82SPSWA27	HWS	62.4	71.3	0.39	86.2	8.9	63.5	6M	8.96	8.87	Q-CODI
821194		82SPSWA28	HWS	65.2	73.4	0.38	89.0	9.9	64.8	2H	8.75	8.74	Q-CODI
821195		82SPSWA29	SWS	62.8	68.8	0.39	83.6	9.9	63.1	7H	8.90	8.89	P-FYELD
821196		82SPSWA30	HWS	63.2	71.7	0.40	86.5	9.5	65.4	5H	8.36	8.32	P-CODI

1/ Observed Values Corrected to 14% Moisture Basis.3/ Absorption at 14% Moisture Corrected to 10% Protein. 5/ Particularly Promising Overall Quality Characteristics.4/ Observed Values Corrected to 10% Protein. 6/ Promising Overall Quality Characteristics.COMMENTS: Many of these selections have hard type endosperms as shown by cookie diameter and NIR texture tests.  
These are noted as HWS.





NURSCO 48

TULELAKE, CA

Y.P. PURI

LABNUM	VARIETY	IDNO	CLASS	TWT	FYIELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	MTYPE	BABS
821197 YECORO ROJO		TL82-2105	HRS	62.4	72.0	0.42	85.9	9.1	60.3	8M	63.4
821198 FIELDER		TL82-2106	SWS	62.0	70.7	0.41	85.0	8.6	56.4	2M	
821199 YOLO		TL82-2107	HRS	61.4	73.6	0.37	89.8	8.3	58.1	2M	55.6
821200 906 R		6/ TL82-2108	HRS	62.4	71.8	0.40	86.7	10.1	61.0	8M	64.8
821201 SHASTA		TL82-2109	HRS	64.4	73.1	0.37	89.3	10.8	62.0	3M	63.0
821202 SHASTA		5/ TL82-2132	HRS	64.0	73.2	0.39	88.4	11.4	62.3	3M	62.9
821203 906 R		TL82-2133	HRS	62.4	71.9	0.37	88.0	11.6	63.2	8M	66.0
821204 YOLO		TL82-2134	HRS	61.6	74.0	0.37	90.2	9.0	59.0	2M	56.2
821205 FIELDER		TL82-2135	SWS	62.4	70.8	0.40	85.5	9.5	56.9	1M	
821206 YECORO ROJO		TL82-2136	HRS	62.8	72.8	0.38	88.7	11.1	61.6	8M	63.9
821207 YECORO ROJO		TL82-2137	HRS	62.2	72.9	0.38	88.8	12.3	62.0	4H	65.5
821208 FIELDER		TL82-2138	SWS	61.6	71.1	0.42	84.8	10.0	58.0	1M	
821209 YOLO		5/ TL82-2139	HRS	61.6	74.4	0.39	89.7	9.8	57.6	2M	55.6
821210 906 R		TL82-2140	HRS	60.8	72.0	0.38	87.5	12.9	63.8	5H	67.9
821211 SHASTA		TL82-2141	HRS	63.6	74.0	0.40	88.9	11.6	61.1	2M	61.9
821212 SHASTA		TL82-2164	HRS	64.0	73.4	0.41	87.6	12.0	61.8	3M	63.5
821213 906 R		5/ TL82-2165	HRS	61.6	72.3	0.37	88.3	12.8	63.4	5H	67.4
821214 YOLO		TL82-2166	HRS	62.4	74.2	0.38	89.9	10.1	59.1	2M	57.4
821215 FIELDER		TL82-2167	SWS	62.4	70.4	0.40	85.3	10.0	56.8	1M	
821216 YECORO ROJO		TL82-2168	HRS	62.0	72.7	0.37	88.9	12.8	61.8	3H	66.8

1/ Observed Values Corrected to 14% Moisture Basis.

5/ Particularly Promising Overall Quality Characteristics.

3/ Absorption at 14% Moisture Corrected to 11% Protein.

6/ Promising Overall Quality Characteristics.

4/ Observed Values Corrected to 11% Protein.



NURSCO 48

COMMON WHEAT

TULELAKE, CA

Y. P. PURI

LABNUM	VARIETY	IDNO	CLASS	BABSC 3/	MTIME	LVOL	LVOLC 4/	BCRGR	CODI	CODIC 4/	RMKS
821197 YECORO ROJO		TL82-2105	HRS	65.3	5.1	833	951	2	9.04	8.77	P-MTIME, LVOL& BCRG1
821198 FIELDER		TL82-2106	SWS								
821199 YOLO		TL82-2107	HRS	58.3	1.4	725	892	9			
821200 906 R		TL82-2108	HRS	65.7	4.5	885	941	3			
821201 SHASTA		TL82-2109	HRS	63.2	1.7	850	862	2			
821202 SHASTA		TL82-2132	HRS	62.5	1.6	875	850	2			
821203 906 R		TL82-2133	HRS	65.4	3.5	965	928	2			
821204 YOLO		TL82-2134	HRS	58.2	1.2	765	889	9	9.12	8.96	P-MTIME, LVOL& BCRGF
821205 FIELDER		TL82-2135	SWS								
821206 YECORO ROJO		TL82-2136	HRS	63.8	3.8	930	924	2			
821207 YECORO ROJO		TL82-2137	HRS	64.2	3.8	975	894	2	9.05	8.94	P-MTIME, BCRGR
821208 FIELDER		TL82-2138	SWS								
821209 YOLO		TL82-2139	HRS	56.8	1.1	835	909	8			
821210 906 R		TL82-2140	HRS	66.0	4.2	1005	887	2			Q-MTIME, BCRGR
821211 SHASTA		TL82-2141	HRS	61.3	1.4	915	878	4			Q-MTIME, BCRGR
821212 SHASTA		TL82-2164	HRS	62.5	1.7	890	828	3			
821213 906 R		TL82-2165	HRS	65.6	4.1	1000	888	2			
821214 YOLO		TL82-2166	HRS	58.3	1.0	850	906	8			P-MTIME, BCRGR
821215 FIELDER		TL82-2167	SWS						9.12	9.01	
821216 YECORO ROJO		TL82-2168	HRS	65.0	3.4	980	868	3			

COMMENTS: 906R appears equal to or better than Yecora Rojo in overall quality.

P = Poor; Q = Questionable



NURSCO 49

PULLMAN, R. S. WA

C. F. KONZAK

LABNUM	VARIETY	IDNO	CLASS	TWT	FYIELD	FASH	MSCOR	FPROT	MABSC	MTYPE	BABS
					1/			1/	3/		
821217	WAVERLY --PULLMAN--	C1017911	SWS	62.0	70.8	0.35	89.2	10.2	58.4	2M	
821218		6/ WA6916	SWS	63.2	69.8	0.37	86.7	10.3	57.7	3M	
821219		6/ WA6917	SWS	63.2	70.0	0.36	87.5	10.1	57.8	4M	
821220		6/ WA6918	SWS	62.8	71.1	0.36	88.7	9.9	58.2	3M	
821221		WA6919	SWS	62.8	68.5	0.35	85.9	10.6	58.8	3M	
821222		6/ WA6920	SWS	63.2	69.7	0.36	86.7	9.4	59.1	4M	
821223		6/ K7905168	SWS	62.4	69.1	0.36	86.2	10.1	58.7	4M	
821224		6/ K7905171	SWS	63.2	69.3	0.36	86.4	9.8	58.6	4M	
821225	WAMPUM --PULLMAN--	C1017691	HRS	61.6	70.5	0.36	87.0	10.5	61.6	4H	63.7
821226		6/ K7900727	HRS	62.0	70.1	0.32	88.7	12.1	63.1	2H	66.3
821227		K8000943	HRS	63.2	70.9	0.33	89.2	12.6	63.4	4H	66.6
821228		6/ K8001424	HRS	61.6	69.3	0.33	87.7	10.6	61.1	6M	63.3
821229	WAVERLY --ROYAL SLOPE--	C1017911	SWS	62.2	72.0	0.41	83.8	10.7	59.9	3M	
821230		6/ WA6916	SWS	63.6	71.8	0.45	80.3	10.2	59.7	3M	
821231		6/ WA6917	SWS	63.2	71.2	0.45	79.6	10.2	59.4	4M	
821232		6/ WA6918	SWS	63.1	71.3	0.46	78.6	10.1	60.1	3M	
821233		6/ WA6919	SWS	63.6	71.2	0.45	79.4	10.0	58.6	3M	
821234		6/ WA6920	SWS	63.7	70.1	0.46	78.5	10.0	58.3	3M	
821235		6/ K7905168	SWS	63.4	70.3	0.43	80.4	10.0	59.3	4M	
821236		6/ K7905171	SWS	63.7	70.1	0.45	69.5	10.2	64.6	4H	
821237	WAMPUM --ROYAL SLOPE--	C1017691	HRS	63.4	72.3	0.46	84.1	11.8	64.4	5H	64.8
821238		6/ K7900727	HRS	62.9	71.8	0.44	84.1	11.6	64.1	5H	66.8
821239		K8000943	HRS	63.7	70.6	0.42	84.1	11.8	62.8	5H	68.7
821240		K8001424	HRS	62.2	69.2	0.43	81.2	11.3	58.9	4M	63.3

1/ Observed Values Corrected to 14% Moisture Basis.

5/ Particularly Promising Overall Quality Characteristics.

3/ Absorption at 14% Moisture Corrected to 11% Protein.

6/ Promising Overall Quality Characteristics.

4/ Observed Values Corrected to 11% Protein.

COMMENTS: None of the SWS's appear equal to Waverly in milling quality, but were not poor enough to be unacceptable.  
The Royal Slope cite was consistently high in flour ash which lowered the milling scores.





NURSCO 49

PULLMAN, R. S. WA

C. F. KONZAK

LABNUM	VARIETY	IDNO	CLASS	BABSC	MTIME	LVOL	LVOLC	BCRGR	CODI	CODIC	RMKS
				<u>3/</u>			<u>4/</u>			<u>4/</u>	
821217	WAVERLY --PULLMAN--	C1017911	SWS						9.35	9.26	
821218		WA6916	SWS						8.92	8.85	
821219		WA6917	SWS						8.96	8.86	
821220		WA6918	SWS						8.91	8.79	
821221		WA6919	SWS						9.11	9.07	Q-FYELD&MSCOR
821222		WA6920	SWS						9.05	8.87	
821223		K7905168	SWS						9.15	9.05	
821224		K7905171	SWS						9.25	9.12	
821225	WAMPUM --PULLMAN--	C1017691	HRS	64.2	3.9	1055	1086	2	8.65	8.61	
821226		K7900727	HRS	65.2	2.3	1055	987	2	8.29	8.38	
821227		K8000943	HRS	65.0	3.0	1005	906	2	8.20	8.33	Q-LVOL
821228		K8001424	HRS	63.7	4.4	935	960	3	8.82	8.79	Q-BCRGR
821229	WAVERLY --ROYAL SLOPE--	C1017911	SWS						8.71	8.67	
821230		WA6916	SWS						8.81	8.72	
821231		WA6917	SWS						8.69	8.60	
821232		WA6918	SWS						8.92	8.83	
821233		WA6919	SWS						9.21	9.10	
821234		WA6920	SWS						8.82	8.71	
821235		K7905168	SWS						8.79	8.68	
821236		K7905171	SWS						9.02	8.94	
821237	WAMPUM --ROYAL SLOPE--	C1017691	HRS	64.0	2.9	1090	1040	3	8.26	8.33	
821238		K7900727	HRS	66.2	3.7	1008	971	3	8.14	8.19	
821239		K8000943	HRS	67.9	5.0	960	910	5	7.62	7.68	P-LVOL&BCRGR
821240		K8001424	HRS	63.0	3.9	960	941	5	8.01	8.04	P-BCRGR



NURSCO 50

LIND, PULL, ABD WA-ID

LABNUM	VARIETY	IDNO	CLASS	FASH	FPROT	FABSC	FPEAK	FSTAB	VISCC	MABSC	MTYPE	BABSC	MTIME
				<u>1/</u>	<u>1/</u>					<u>3/</u>		<u>3/</u>	
821241	HATTON-WANSER COMPOSITE --LIND HRW--		HRW	0.44	12.5	60.0	6.7	6.3	152	63.0	3H	63.1	3.3
821242		WA6816	HRW	0.41	12.6	62.5	3.6	4.4	173	60.7	2H	60.8	1.3
821243		OR7925	HRW	0.44	12.9	58.8	6.7	12.0	166	61.6	4H	63.2	3.2
821244	STEPHENS --PULLMAN SWW--	C1017569	SWW	0.41	8.7	57.6	1.0	1.9	74	51.0	2M		
821245		WA6696	SWW	0.41	9.1	57.1	1.0	3.6	128	52.8	5M		
821246	URQUIE --PULLMAN SWS--	C1017413	SWS	0.44	10.8	57.0	2.2	2.1	94	54.4	2M		
821247		WA6831	SWS	0.41	11.1	56.2	2.1	1.7	102	54.4	2M		
821248	FIELDWIN --ABERDEEN SWS--	C1017425	SWS	0.46	8.6	58.0	1.3	1.7	82	50.9	2M		
821249	OWENS	C1017904	SWS	0.48	8.3	54.6	1.0	2.2	60	51.7	2M		
821250		ID172	SWS	0.50	8.7	55.3	1.6	2.1	62	49.8	2M		

1/ Observed Values Corrected to 14% Moisture Basis.

5/ Particularly Promising Overall Quality Characteristics.

3/ Absorption at 14% Moisture Corrected to 10% Protein.

6/ Promising Overall Quality Characteristics.

4/ Observed Values Corrected to 10% Protein.



NURSCO 50

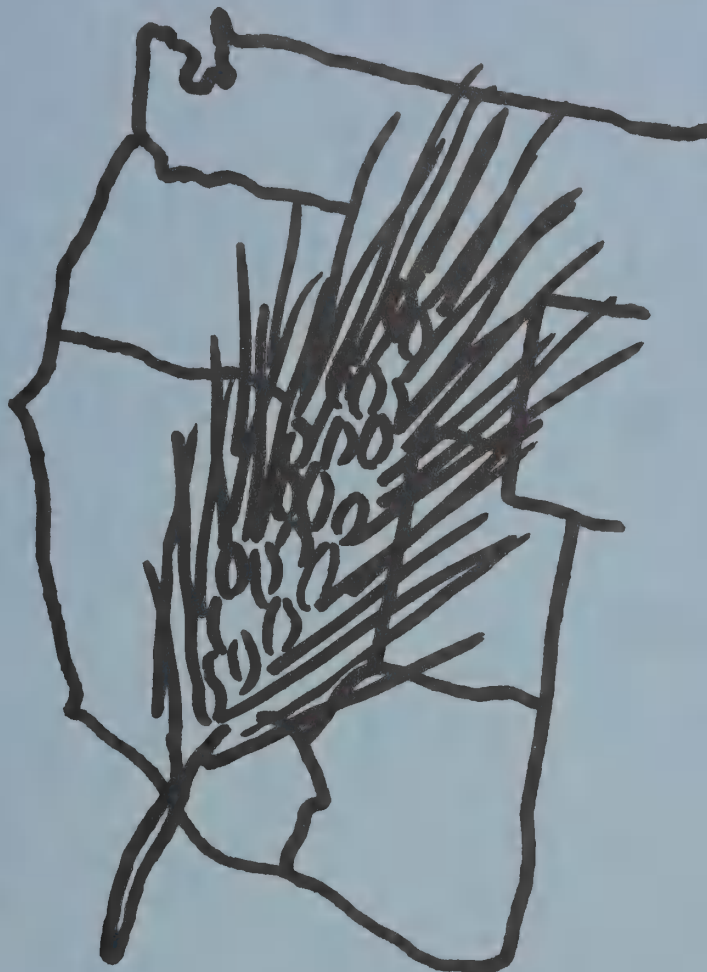
LIND, PULL, ABD WA-ID

LABNUM	VARIETY	IDNO	CLASS	LVOL	CODI	CODIC	CAVOL	SCSOR	WTIN	NYELD	NOSCO	RMKS
						4/						
821241	HATTON-WANSER COMPOSITE --LIND HRW--		HRW	1078	8.45	8.65						
821242		WA6816	HRW	1140	8.30	8.51						
821243		OR7925	HRW	1133	7.97	8.21						
821244	STEPHENS --PULLMAN SWW--	CI017569	SWW		9.10	8.96	1350	77.0	364	17	71	
821245		WA6696	SWW		8.64	8.54	1250	70.0	355	16	73	
821246	URQUIE --PULLMAN SWS--	CI017413	SWS		9.11	9.20	1390	79.0	365	17	68	
821247		WA6831	SWS		8.92	9.05	1335	76.0	373	17	66	
821248	FIELDWIN --ABERDEEN SWS--	CI017425	SWS		9.27	9.12	1335	77.0	370	17	66	
821249	OWENS	CI017904	SWS		9.46	9.27	1335	77.0	371	17	68	
821250		ID172	SWS		9.26	9.12	1350	80.0	352	16	62	

COMMENTS: Evaluated in collaboration with industry co-operators. See Twelfth Annual Report - 1982 Crop.



# TWELFTH ANNUAL REPORT - 1982 CROP



## PACIFIC NORTHWEST GRAIN COUNCIL COLLABORATIVE TEST

August 1983

Distributive Report<sup>1/</sup>

<sup>1/</sup> Prepared by USDA,ARS Western Wheat Quality Laboratory, Pullman, Washington.

(These are the results of preliminary tests which are not to be used for publication in any form without the consent of the Collaborative Committee.)





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## OBJECTIVES AND INTRODUCTION

These collaborative flour tests are supported by the Pacific Northwest Grain Council in cooperation with the USDA, ARS, Western Wheat Quality Laboratory. The purpose is to maintain and improve the milling and baking quality of wheat in the Western Region. It is an attempt to keep current with the needs of wheat processors, both domestic and abroad. The information gained from the data of the domestic and foreign collaborators is of significant value to the wheat breeding programs of the region. The project hopefully provides each collaborator an opportunity to express his opinion as to whether or not the tested selections would satisfy the end-use demands of his industry.

The data and comments included in the individual reports provide the USDA, ARS, Western Wheat Quality Laboratory and plant breeders guidelines for use in the development of future wheat varieties that will best satisfy the needs of the industry.

## ACKNOWLEDGMENTS

We would like to thank each of the Collaborators (listed on Page 2) for their participation in this annual project and also the U.S. Wheat Associates, USA, Inc. for their assistance in arrangements with our valued foreign customers.



## PNWGS COLLABORATORS

Japanese Milling Association Committee <sup>1/</sup>	Tokyo, Japan
Dae Han Flour Mills Co., Ltd.	Inchon, Korea
Cheil Sugar Co., Ltd.	Seoul, Korea
Phillipine Association of Flour Millers, Inc.	Manila, Phillipine
Centennial Mills	Portland, Oregon
Fisher Flouring Mills	Seattle, Washington
General Mills, Inc.	Vallejo, California
Mother's Cake & Cookie Co.	Oakland, California
Nabisco Brands, Inc.	Fair Lawn, New Jersey
Cereal Quality Laboratory	Bozeman, Montana
Idaho Wheat Quality Laboratory	Aberdeen, Idaho
Kerr Pacific Milling Corp.	Pendleton, Oregon
Continental Mills, Inc.	Seattle, Washington
Western Wheat Quality Laboratory	Pullman, Washington

<sup>1/</sup> Cooperative work by technical members for 4 major flour milling companies in Japan (Nisshin Flour Milling Co., Nippon Flour Mills Co., Showa Sangyo Co., and Nitto Flour Milling Co.) and Japanese Wheat Flour Institute.





1982

VARIETIES & SELECTIONS

Sample No.	Selection	Breeder	Location Grown	CLASS	Flour <sup>1</sup> / Protein
1	Hatton/Wanser <sup>2</sup> / WA6831	"CHECK" E. Donaldson	Lind, WA	HRW	12.5
2			Lind, WA	HRW	12.6
3	OR7925	C.R. Rohde	Lind, WA	HRW	12.9
4	Stephens	"CHECK"	Pullman, WA	SWW	8.7
5	WA6696	C.J. Peterson	Pullman, WA	SWW	9.1
6	Urquie	"CHECK"	Pullman, WA	SWS	10.8
7	WA6831	C.F. Konzak	Pullman, WA	SWS	11.1
8	Fieldwin	"CHECK"	Aberdeen, ID	SWS	8.6
9	Owens	D.F. Sunderman	Aberdeen, ID	SWS	8.3
10	ID 172	D.F. Sunderman	Aberdeen, ID	SWS	8.7



### Wheat Cleaning and Milling Procedure for the Miag Multomat Mill

When wheat arrives, it is stored in 5-bu. steel bins as cleaned. The cleaning process consists of using a Clipper cleaner followed by a Carter Disc Separator and a Forester Grain Scourer.

To condition the wheat for milling, the proper temper or moisture level is attained by the addition of water. A mixer having a 3-bu. capacity is used for this operation. The first temper (13.5 - 14.5% moisture for soft wheat and 15.5 - 16.5% moisture for hard wheat) is added 18 to 24 hours before the milling process. Fifteen to twenty minutes prior to milling, the wheat is given a second temper by the addition of 0.5% water based on wheat weight.

Approximately 120-pound sub-samples of each variety are tempered for milling. The feed rate is adjusted to give the proper load to the mill. Soft common wheats are milled at a rate of 800-900 gms/min., white club wheats at 900-1000 gms/min., and hard wheats at a rate of 850-950 gms/min.

Adjustment of the break rolls is done by setting the rolls to give a uniform break release from sample to sample. The 1st break roll is adjusted so that about 43% of the stream passes through a No. 24 Tyler (707 micron) wire screen in one minute of sifting. The 2nd break roll is adjusted so that about 64% of the screen passes through the No. 24 Tyler wire screen in one minute. The 3rd break roll is adjusted to clean the bran as completely as possible without excessive shattering. The adjustment for reduction rolls is done by observation of stock with the objective of grinding and making as much flour possible at each pass but not to the point of overgrinding and flaking the stock.

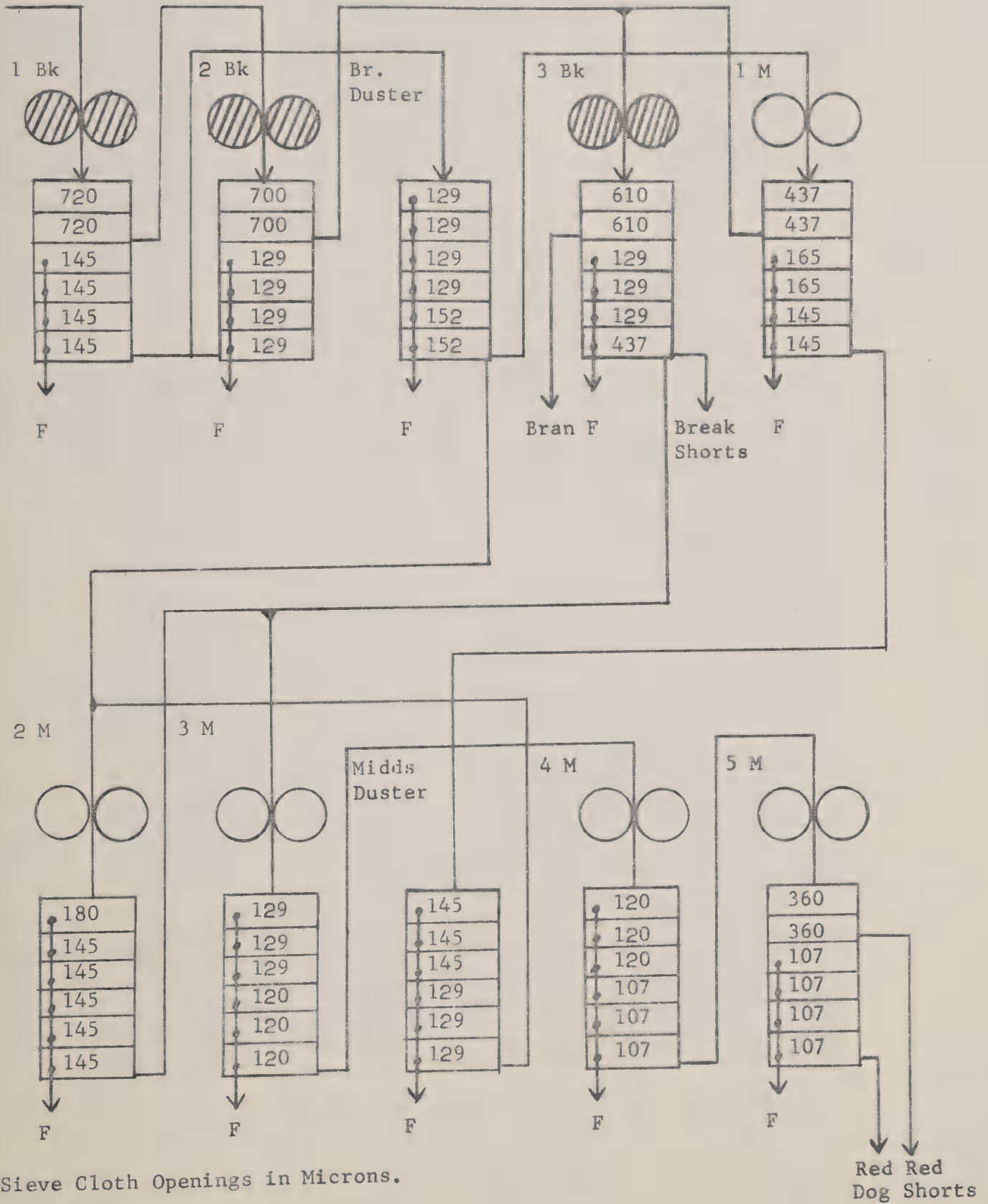


Each of the flour streams are sampled, weighed, and analyzed for moisture and ash. Cumulative ash curves are plotted for each sample milled. The ten flour streams are blended together using a horizontal ribbon blender to give a straight grade flour which is used for baking, analytical and physical-dough testing.

The schematic flow sheet of the mill, showing rolls and flour screens used is on Page 12. Stream samples were collected and flour ash determined to develop ash curves shown on Pages 13-16.

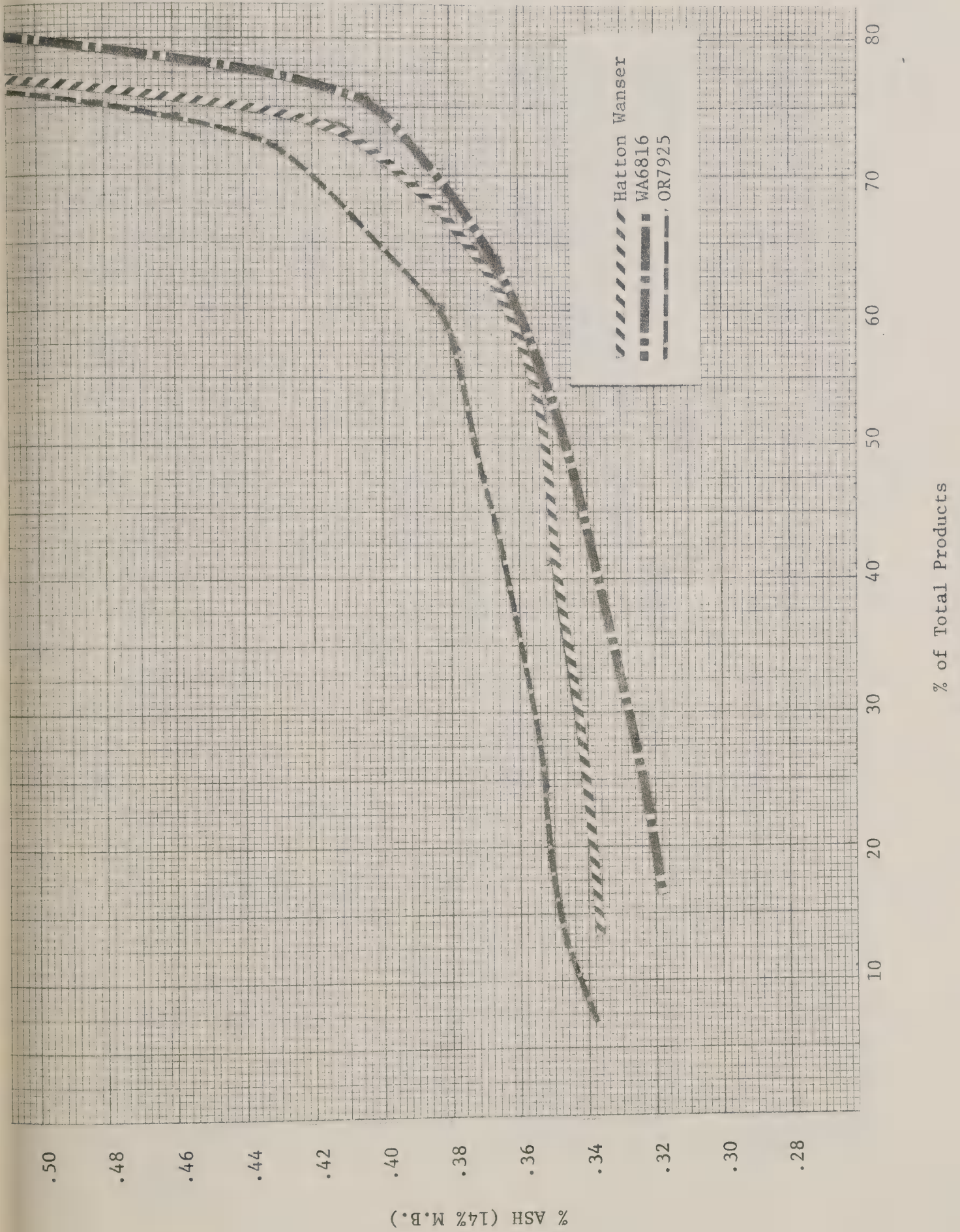


## FLOW SHEET WWQL MIAG MULTOMAT

Tempered  
Wheat

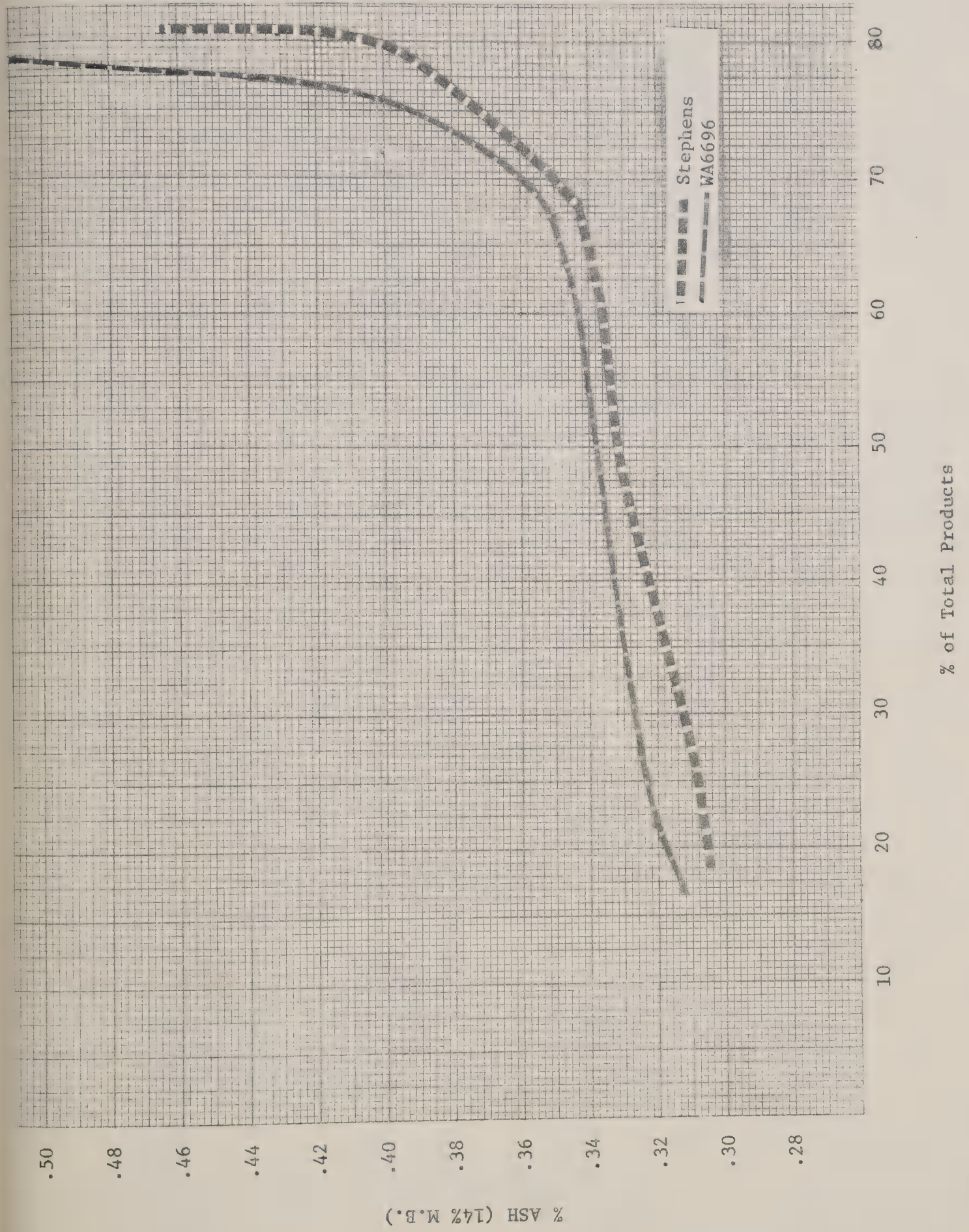






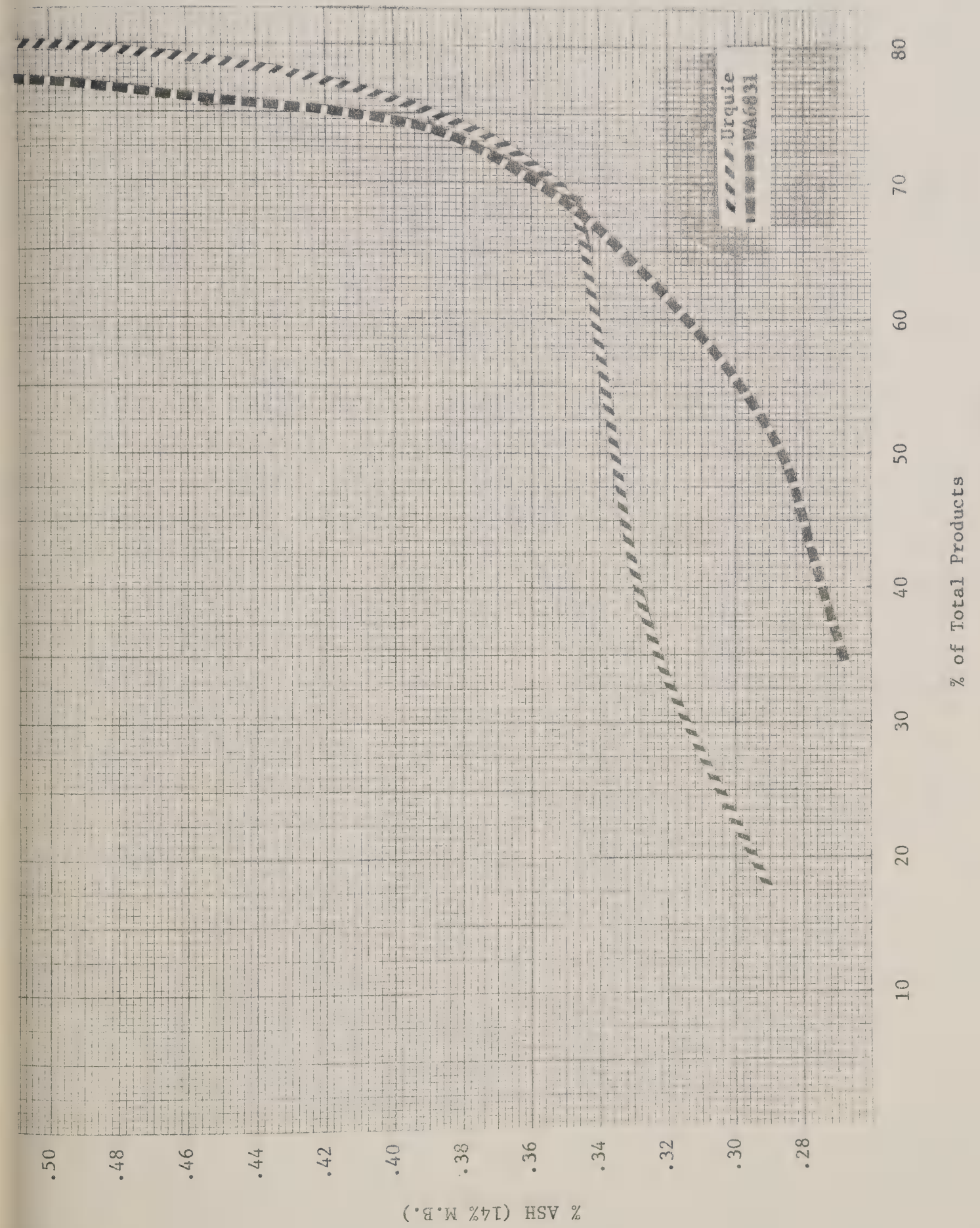






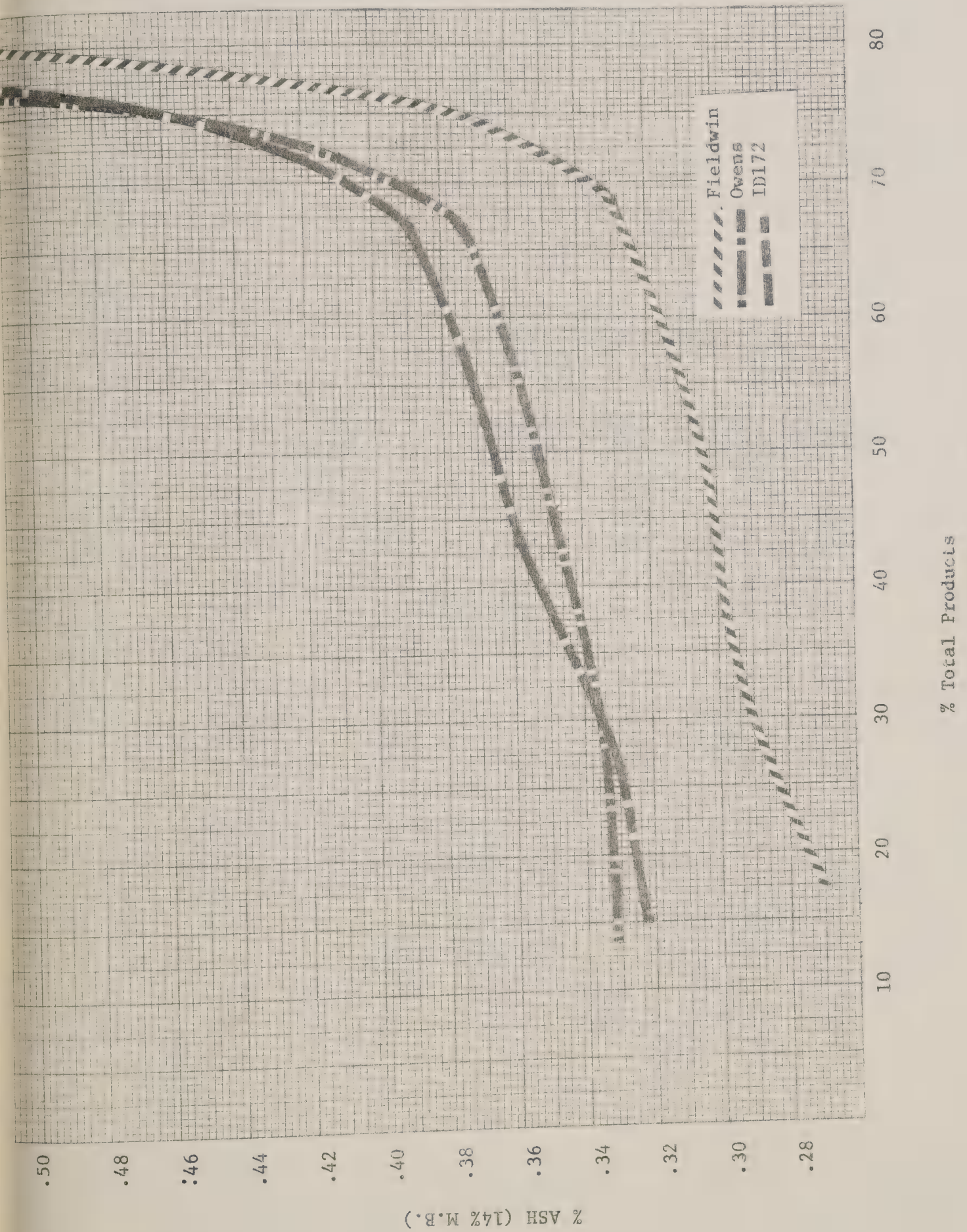














SUMMARY MILLING DATA  
1982 PACIFIC NORTHWEST GRAINS COUNCIL  
COLLABORATIVE TESTS

Sample No.	Selection No. or Variety		STRAIGHT GRADE		POUNDS FLOUR/CWT	
			Flour Yield	Ash*	.40 Ash	.45 Ash
1.	Hatton/Wanser	HRW	75.6	.465	71.2	75.1
2.	WA6816	HRW	78.0	.442	74.4	78.3
3.	OR7925	HRW	74.3	.459	64.9	73.7
4.	Stephens	SWW	78.5	.427	77.6	79.0
5.	WA6696	SWW	77.0	.439	75.6	77.3
6.	Urquie	SWS	78.3	.450	75.9	78.3
7.	WA6831	SWS	75.1	.430	74.3	75.6
8.	Fieldwin	SWS	77.9	.442	76.1	78.1
9.	Owens	SWS	76.8	.519	70.8	74.3
10.	ID 172	SWS	77.0	.518	69.0	74.2

\* Ash (14% M.B.) from cumulative stream analysis.



INDIVIDUAL COLLABORATORS' RATING  
(HRW)

Code and Sample No.	Collab. Flr. No.	Flr. Ash	Flr. Moist.	Farinograph		Bake Mix Abs. Time	Mix Toler.	Oxida. Req.	Loaf Vol.	KBrO <sub>3</sub> Resp. Color	Crumb & Txtr.	Grain	Overall Rating	Overall Baking Rating 1/			
				Abs.	Peak Stab.										Val.		
#1 Hatton/ Wanser		-	-	-	-	-	-	-	-	-	-	-	-	-			
#2 WA6816	Mean( $\bar{x}$ )					CHECK	SAMPLE							5.00			
	1	5	7	6	9	4	4	5	5	5	4	5	5	-			
	2**	-	-	-	-	-	-	-	-	-	-	-	-	-			
	3	5	6	5	7	2	3	-	7	4	3	6	3	-			
	4	5	6	5	6	3	4	-	7	5	5	5	6	-			
	5*	-	-	-	-	-	-	-	-	-	-	-	-	-			
	6*	-	-	-	-	-	-	-	-	-	-	-	-	-			
	7	5	6	5	6	5	3	4	6	6	5	5	5	-			
	8*	-	-	-	-	-	-	-	-	-	-	-	-	-			
	9**	-	-	-	-	-	-	-	-	-	-	-	-	-			
	10*	-	-	-	-	-	-	-	-	-	-	-	-	-			
	11*	-	-	-	-	-	-	-	-	-	-	-	-	-			
	12	5	7	5	7	4	4	-	7	4	5	5	5	-			
	13*	-	-	-	-	-	-	-	-	-	-	-	-	-			
14	5	4	5	6	4	4	-	4	4	3	6	5	5				
	Mean( $\bar{x}$ )	5.00	6.00	5.17	6.83	3.67	3.67	4.50	6.00	4.67	4.20	5.50	5.17	6.00	3.83	4.83	5.00
#3 OR7925	1	4	5	5	5	5	6	5	5	5	3	5	5	-			
	2**	-	-	-	-	-	-	-	-	-	-	-	-	-			
	3	6	4	5	4	6	6	-	3	5	7	7	5	5	-		
	4	5	5	5	5	5	5	-	5	5	4	5	4	4	-		
	5*	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	6*	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	7	5	5	5	5	5	5	5	5	5	5	5	4	4	-		
	8*	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	9**	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	10*	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	11*	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	12	5	6	5	5	6	5	-	5	6	5	6	5	4	-		
	13*	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	14	6	5	5	4	5	6	-	5	5	5	6	5	5	-		
	Mean( $\bar{x}$ )	5.17	5.00	5.00	4.67	5.33	5.50	5.00	4.67	5.17	5.20	4.50	5.33	5.00	4.67	4.50	4.98
1/ Average Mixing Time and Tolerance, Water Absorption, Loaf Volume, Crumb Color, and Grain Texture.																	

\* Due to inadequate sample size no flour of these samples was provided the collaborator.

\*\* No results received from the collaborator.



Code and Sample No.	Collab. No.	Milling Rating	Flr. Prot.	Flr. Ash	Flr. Moist.	Abs.	Farinograph Peak	Stab. Val.	Mac. Visc.	Cookie Dia.	Spread Factor	Pancake	Udon Noodle	Sponge Cake	Overall Rating	Overall Baking Rating <sup>1/</sup>
#4 Stephens	-	-	-	-	-	-	-	-	CHECK SAMPLE	-	-	-	-	-	-	-
#5 WA6696	Mean( $\bar{x}$ )															5.00
	1	1	5	4	5	6	3	1	-	3	1	-	-	-	-	-
	2**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	3	-	5	5	5	5	3	3	2	5	5	-	-	-	-	-
	4	5	5	5	5	5	3	3	3	7	7	-	-	-	-	-
	5	5	5	5	6	5	5	4	-	-	-	-	-	-	-	-
	6	7	6	4	4	4	-	6	-	-	-	-	-	-	-	-
	7	4	5	5	5	5	5	5	-	5	5	-	5	5	-	-
	8**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	9**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	10	3	5	4	-	-	-	-	-	-	-	-	-	-	-	-
	11	-	5	5	5	3	3	4	-	3	3	-	-	-	-	-
	12	4	5	5	5	5	5	7	3	4	4	-	-	-	-	-
	13	-	-	-	-	-	-	-	-	-	-	5	-	-	-	-
	14	5	5	5	5	5	5	4	4	3	3	5	5	3	-	-
	Mean( $\bar{x}$ )	4.25	5.10	4.70	5.00	4.78	4.00	4.11	3.00	4.13	4.00	5.00	5.00	4.00		4.39

INDIVIDUAL COLLABORATOR' RATING  
(SWS)

#6 Urquie	-	-	-	-	-	-	-	-	CHECK SAMPLE	-	-	-	-	-	-	-
#7 WA6831	Mean( $\bar{x}$ )															5.00
	1	3	4	6	5	6	5	5	-	6	3	-	-	-	-	-
	2**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	3	5	4	5	4	6	5	5	3	3	3	-	-	-	-	-
	4	-	-	-	-	-	-	-	5	5	5	-	-	-	-	-
	5	5	6	6	6	5	5	5	-	-	-	-	-	-	-	-
	6	6	3	6	4	6	5	5	-	5	4	-	5	5	-	-
	7	5	5	5	5	5	5	5	-	-	-	-	-	-	-	-
	8**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	9**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	10	4	5	6	-	-	-	-	-	4	4	-	-	-	-	-
	11	-	4	7	5	5	5	5	-	4	4	-	-	-	-	-
	12	4	5	6	5	5	5	5	5	4	4	-	-	-	-	-
	13	-	-	-	-	-	-	-	-	-	-	5	-	-	-	-
	14	5	5	6	5	5	5	5	5	5	5	5	5	5	-	-
	Mean( $\bar{x}$ )	4.63	4.56	5.89	4.88	5.38	5.00	5.00	4.50	4.50	4.00	5.00	5.00	5.00		4.87

<sup>1/</sup> Average of factors except milling rating.

\*\* No results received from the collaborator.





INDIVIDUAL COLLABORATORS' RATING  
(SWS)

Code and Sample No.	Collab. No.	Milling Rating	Flr. Prot.	Flr. Ash	Flr. Moist.	Farinograph Abs. Peak Stab. Val.	Mac. Visc.	Cookie Dia.	Spread Factor	Pancake	Udon Noodle	Sponge Cake	Overall Rating	Overall Baking Rating <sup>1/</sup>
#8 Fieldwin	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Mean( $\bar{x}$ )						CHECK SAMPLE							5.00
#9 Owens	1	3	5	5	5	-	-	6	6	-	-	-	-	-
	2**	-	-	-	-	-	-	-	-	-	-	-	-	-
	3	3	5	4	4	7	7	7	7	-	-	-	-	-
	4	5	5	4	5	3	4	4	6	-	-	-	-	-
	5	5	6	5	6	3	5	5	6	-	-	-	-	-
	6	4	6	3	7	3	-	-	-	-	-	-	-	-
	7	-	5	5	5	-	-	-	-	-	5	5	-	-
	8**	-	-	-	-	-	-	-	-	-	-	-	-	-
	9**	-	-	-	-	-	-	-	-	-	-	-	-	-
	10	3	5	4	-	-	-	5	-	-	-	-	-	-
	11	-	6	3	4	5	4	6	-	-	-	-	-	-
	12	6	5	5	5	4	6	5	6	-	-	-	-	-
	13	-	-	-	-	-	-	-	-	4	-	-	-	-
	14	4	5	5	5	6	6	6	6	5	5	5	-	-
	Mean( $\bar{x}$ )	4.13	5.30	4.30	5.11	4.43	5.17	4.43	6.50	5.71	6.00	4.50	5.00	5.04
#10 ID172	1	3	5	5	5	5	5	7	9	-	-	-	-	-
	2**	-	-	-	-	-	-	-	-	-	-	-	-	-
	3	3	5	3	5	6	5	7	7	-	-	-	-	-
	4	5	5	3	5	4	4	6	5	-	-	-	-	-
	5	5	4	3	5	4	5	-	-	-	-	-	-	-
	6	3	4	1	5	5	3	-	-	-	-	-	-	-
	7	-	5	3	5	5	5	5	5	-	5	6	-	-
	8**	-	-	-	-	-	-	-	-	-	-	-	-	-
	9**	-	-	-	-	-	-	-	-	-	-	-	-	-
	10	3	5	3	-	-	-	5	5	-	-	-	-	-
	11	-	4	1	4	4	5	4	-	-	-	-	-	-
	12	4	-	-	-	-	-	6	5	-	-	-	-	-
	13	-	-	-	-	-	-	-	-	5	-	-	-	-
	14	4	5	3	5	6	5	5	5	5	4	6	-	-
	Mean( $\bar{x}$ )	3.75	4.67	2.67	4.88	4.88	4.63	5.38	5.86	5.00	4.50	6.00	-	4.87
	1/ Average of factors except milling rating.													

\*\* No results received from the collaborator.



BRIEF COMMENTS AND CONCLUSIONS RECEIVED

## #1 (Hatton/Wanser)

- Good milling quality.
- Good dough characteristics.

## #2

- Low ash content of wheat and flour.
- Good flour color.
- Relatively high water absorption in Farinograph, but gave weak dough (short peak time and poor dough stability).
- Baking absorption was high, but yielded sticky dough, and had poor mixing tolerance.
- Long proofing times were necessary.

## #3

- Low test weight and poor milling quality.
- Dough was tough and tight, and gave stodgy and crumbly loaf.
- Long proofing time was necessary.

HRW ranking: #1 > #2 > #3

Conclusion: #2 and #3 were inferior to the check sample, they required very long proofing time.

## #4 (Stephens)

- Low ash content of wheat.
- Good flour color.
- Very good noodle color.
- Good eating quality for cookie

## #5

- Good flour color, but dark noodle color.
- Poor external appearance and crumb grain in sponge cake and cookie (especially for the flour millin in U.S.).
- High sedimentation value.

SWW ranking: #4 > #5

Conclusion: #5 good in flour color, poor in noodle color, and showed external appearance in sponge cake.

## #6 (Urquie)

- Good noodle color.
- Many cracking on the top surface and good eating quality in cookie.
- Large volume of sponge cake.



- #7
- High wheat protein.
  - Dark flour color.
  - Flat Extensogram.
  - Poor noodle color.
  - Good noodle eating quality.
  - Crumb structure of sponge cake and cookie was inferior to the control (#6).
  - Small spread factor of cookie.

SWS (Urquie series) ranking: #6 > #7

Conclusion: #7 had slightly better noodle eating quality than Urquie,  
but flour color and noodle color is inferior.

- #8 (Fieldwin)
- Relatively good noodle eating quality.
  - Many favorable cracking on the top surface of cookie.

- #9
- Good color and eating quality in noodle.
  - Relatively good eating quality in sponge cake.

- #10
- Gave dark colored and stiff noodle.
  - Good appearance and good eating quality in sponge cake.
  - Good cookie dough characteristics.

SWS (Fieldwin series) ranking: #10 > #9 ≥ #8

Conclusion: Both #9 and #10 are superior to Fieldwin, although #10 gave relatively poor noodle.









NURSCO 51

PULLMAN, LIND WA

LABNUM	VARIETY	IDNO	CLASS	WPROT	FYELD	FASH 1/	MSCOR	FMIST	FPROT 1/	AGTRO
821251	MORO --PULLMAN, WINTER--	CI013740	CLUB	9.7	74.4	0.38	90.1	12.8	9.1	79.5
821252	WANSER	CI013844	HRW	11.5	70.9	0.34	87.6	14.0	10.4	73.3
821253	NUGAINES	CI013968	SWW	10.2	69.6	0.34	84.0	12.9	8.6	80.5
821254	PAHA	CI014485	CLUB	9.3	75.0	0.37	91.2	12.9	7.9	85.0
821255	LUKE	CI014586	SWW	11.0	71.7	0.36	85.1	12.8	9.5	79.8
821256	BARBEE	CI017417	CLUB	10.5	69.1	0.36	80.6	12.7	8.6	73.8
821257	DAWS	CI017419	SWW	10.5	70.5	0.35	84.2	12.7	8.9	82.5
821258	STEPHENS	CI017569	SWW	10.4	71.9	0.36	86.5	12.8	8.6	82.0
821259	FARO	CI017590	CLUB	10.0	73.9	0.38	88.8	12.9	8.3	80.5
821260	HATTON	CI017772	HRW	10.3	69.6	0.36	84.3	14.1	9.3	79.3
821261	TYEE	CI017773	CLUB	9.4	74.2	0.36	91.7	12.9	8.1	79.3
821262	LEWJAIN	CI017909	SWW	10.3	71.6	0.35	85.9	12.8	9.2	79.0
821263	CREW	CI017951	CLUB	9.1	73.7	0.36	90.3	13.0	8.4	78.3
821264	HILL 81 (OR68007)	CI017954	SWW	10.3	73.0	0.36	88.2	12.8	8.8	84.0
821265	JACMAR	WA6585	CLUB	9.7	73.2	0.36	89.2	12.8	8.6	82.8
821266	PEAK 72 --PULLMAN, SPRING--	WA6696	SWW	10.6	70.8	0.36	85.1	12.6	8.4	81.5
821267	WARED	CI015319	HRS	13.1	69.4	0.35	84.3	13.5	12.6	75.3
821268	URQUITE	CI015926	HRS	13.8	69.3	0.37	84.0	13.6	12.4	81.5
821269	WAMPUM	CI017413	SWS	11.7	72.4	0.38	85.9	13.3	10.4	75.0
821270		CI017691	HRS	12.1	68.7	0.38	82.1	13.6	11.1	75.5
821271	DIRKWIN	CI017745	SWS	12.5	69.1	0.42	78.7	13.1	11.7	75.5
821272	MCKAY	CI017903	HRS	13.1	68.6	0.35	84.6	13.7	12.3	69.5
821273	OWENS	CI017904	SWS	11.6	68.6	0.32	82.8	12.5	10.5	76.5
821274	WAVERLY	CI017911	SWS	12.7	70.4	0.37	82.9	12.7	11.0	77.0
821275		WA6831	SWS	12.6	69.0	0.34	81.6	13.1	10.4	70.0
821276		K795138	SWS	12.9	69.8	0.40	80.8	12.8	11.2	73.5
821277		K795139	SWS	13.0	68.7	0.35	81.5	12.7	10.9	73.0
821278	MORO --LIND, WINTER--	CI013740	CLUB	13.0	68.7	0.45	76.8	12.9	11.6	71.0
821279	MCCALL	CI013842	HRW	12.5	68.1	0.42	78.7	13.9	12.3	76.5
821280	WANSER	CI013844	HRW	13.3	70.7	0.40	84.8	13.8	13.0	74.0
821281	NUGAINES	CI013968	SWW	12.9	68.7	0.39	80.5	13.0	11.0	73.5
821282	LUKE	CI014586	SWW	12.9	68.8	0.39	78.6	12.8	11.3	76.5
821283	SPRAGUE	CI015376	SWW	12.9	68.7	0.41	78.8	13.1	11.3	77.0
821284	BARBEE	CI017417	CLUB	13.1	67.3	0.42	75.1	13.2	11.8	62.5
821285	DAWS	CI017419	SWW	13.2	66.4	0.42	73.9	13.3	11.3	75.5

1/ Observed Values Corrected to 14% Moisture Basis.

5/ Particularly Promising Overall Quality Characteristics.

3/ Absorption at 14% Moisture Corrected to 11% Protein.

6/ Promising Overall Quality Characteristics.

4/ Observed Values Corrected to 11% Protein.



NURSCO 51

PULLMAN, LIND WA

LABNUM	VARIETY	IDNO	CLASS	MABSC 3/	MTYPE	FABS	FPEAK	FSTAB	VISC	VISCC
821251	MORO --PULLMAN, WINTER--	CI013740	CLUB	52.0	2M					
821252	WANSER	CI013844	HRW	61.1	4M				82	118
821253	NUGAINES	CI013968	SWW	55.1	2M	62.0	6.0	6.8	104	172
821254	PAHA	CI014485	CLUB	50.8	2L				40	80
821255	LUKE	CI014586	SWW	55.1	3M				101	134
821256	BARBEE	CI017417	CLUB	49.9	1L				41	66
821257	DAWS	CI017419	SWW	52.6	3M				119	182
821258	STEPHENS	CI017569	SWW	53.0	2L				69	114
821259	FARO	CI017590	CLUB	50.4	1M				71	127
821260	HATTON	CI017772	HRW	61.8	4M	62.8	5.1	8.3		
821261	TYEE	CI017773	CLUB	50.1	3L				66	124
821262	LEWJAIN	CI017909	SWW	53.4	3M				99	140
821263	CREW	CI017951	CLUB	49.4	1M				52	89
821264	HILL 81 (OR68007)	CI017954	SWW	51.8	2M				66	103
821265	JACMAR	WA6585	CLUB	52.0	2M				55	90
821266		WA6696	SWW	54.0	4L				120	211
821267	PEAK 72 --PULLMAN, SPRING--	CO15319	HRS	62.8	7H	64.4	25.0	25.6		
821268	WARED	CI015926	HRS	60.6	6M	62.4	10.0	14.0		
821269	URQUIE	CI017413	SWS	53.3	2M				162	179
821270	WAMPUM	CI017691	HRS	59.4	6M	58.7	6.6	11.0		
821271	DIRKWIN	CI017745	SWS	50.3	2M				111	100
821272	MCKAY	CI017903	HRS	58.4	6M	61.8	6.4	5.0		
821273	OWENS	CI017904	SWS	51.3	3M				166	181
821274	WAVERLY	CI017911	SWS	52.5	3M				156	156
821275		WA6831	SWS	52.6	2M				160	178
821276		K795138	SWS	52.9	3M				171	166
821277		K795139	SWS	54.1	2M				178	181
821278	MORO --LIND, WINTER--	CI013740	CLUB	54.6	2M				169	154
821279	MCCALL	CI013842	HRW	61.1	5H	63.0	7.7	11.3		
821280	WANSER	CI013844	HRW	59.8	3H	64.1	8.0	9.7		
821281	NUGAINES	CI013968	SWW	55.3	2M				200	200
821282	LUKE	CI014586	SWW	56.8	2M				169	161
821283	SPRAGUE	CI015376	SWW	55.2	2M				186	177
821284	BARBEE	CI017417	CLUB	50.8	1M				70	63
821285	DAWS	CI017419	SWW	53.9	2M				163	156



USDA, SEA AR  
WESTERN WHEAT QUALITY LAB.  
PULLMAN, WA.

DRILL STRIPS  
PULLMAN, LIND WA

1b

NURSCO 51

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR	CODI
					3/			4/		
821251	MORO --PULLMAN, WINTER--	CI013740	CLUB	50.8	52.7	1.5	825	930	9	9.35
821252	WANSER	CI013844	HRW	62.2	62.8	3.0	955	996	4	8.37
821253	NUGAINES	CI013968	SWW	53.4	55.8	1.0	850	999	6	8.80
821254	PAHA	CI014485	CLUB	46.9	50.0	1.0	615	786	9	9.42
821255	LUKE	CI014586	SWW	53.3	54.8	1.0	890	980	6	9.39
821256	BARBEE	CI017417	CLUB	46.7	49.1	1.0	655	787	9	9.26
821257	DAWS	CI017419	SWW	55.7	57.8	2.9	855	981	3	8.65
821258	STEPHENS	CI017569	SWW	51.3	53.7	1.7	680	824	9	8.84
821259	FARO	CI017590	CLUB	47.9	50.6	1.6	710	859	9	9.05
821260	HATTON	CI017772	HRW	62.3	64.0	2.5	855	960	3	8.39
821261	TYEE	CI017773	CLUB	48.4	51.3	1.4	770	930	8	9.19
821262	LEWJAIN	CI017909	SWW	50.8	52.6	1.8	815	923	7	9.12
821263	CREW	CI017951	CLUB	47.0	49.6	1.0	670	813	9	8.95
821264	HILL 81 (OR68007)	CI017954	SWW	50.8	53.0	1.3	720	852	9	9.10
821265	JACMAR	WA6585	CLUB	48.8	51.2	1.0	695	827	9	9.50
821266	PEAK 72 --PULLMAN, SPRING--	WA6696	SWW	56.9	59.5	2.3	850	1006	5	8.76
821267	WARD	CO15319	HRS	68.6	67.0	8.0	1075	976	2	7.92
821268	WARD	CI015926	HRS	65.7	64.3	3.8	1090	1003	2	8.07
821269	URQUITE	CI017413	SWS	51.9	52.5	1.5	900	936	6	8.96
821270	WAMPUM	CI017691	HRS	61.7	61.6	3.7	1045	1039	2	8.42
821271	DIRKWIN	CI017745	SWS	50.2	49.5	1.0	750	708	9	8.47
821272	MCKAY	CI017903	HRS	61.9	60.6	3.1	1075	994	2	8.14
821273	OWENS	CI017904	SWS	51.0	51.5	2.3	870	900	6	8.92
821274	WAVERLY	CI017911	SWS	53.7	53.7	1.4	885	885	6	8.96
821275		WA6831	SWS	51.2	51.8	1.5	935	971	4	8.90
821276		K795138	SWS	54.3	54.1	1.5	975	963	2	8.71
821277		K795139	SWS	56.2	56.3	2.8	963	969	3	8.51
821278	MORO --LIND, WINTER--	CI013740	CLUB	53.4	52.8	1.7	1050	1017	2	9.02
821279	MCCALL	CI013842	HRW	63.6	62.3	3.5	1090	1022	2	8.15
821280	WANSER	CI013844	HRW	62.0	60.0	2.9	1055	917	2	8.07
821281	NUGAINES	CI013968	SWW	55.5	55.5	1.5	960	960	2	8.61
821282	LUKE	CI014586	SWW	56.3	56.0	1.6	980	962	2	8.96
821283	SPRAGUE	CI015376	SWW	54.7	54.4	1.0	930	912	4	8.82
821284	BARBEE	CI017417	CLUB	49.8	49.0	1.0	645	601	9	8.97
821285	DAWS	CI017419	SWW	54.4	54.1	1.9	990	972	2	8.64





DRILL STRIPS

PULLMAN, LIND WA

LABNUM	VARIETY	IDNO	CLASS	CODIC 4/	CAVOL	SCSOR	WTIN	NOSCO	RMKS
821251	MORO --PULLMAN, WINTER--	C1013740	CLUB	9.22	1305	78.0	374	74	
821252	WANSER	C1013844	HRW	8.33					
821253	NUGAINES	C1013968	SWW	8.52	1270	74.0	360	74	
821254	PAHA	C1014485	CLUB	9.31	1370	81.0	387	76	
821255	LUKE	C1014586	SWW	9.26	1385	80.0	379	70	
821256	BARBEE	C1017417	CLUB	9.09	1335	78.0	383	74	
821257	DAWS	C1017419	SWW	8.42	1280	73.0	373	77	
821258	STEPHENS	C1017569	SWW	8.58	1315	79.0	383	77	
821259	FARO	C1017590	CLUB	8.86	1300	77.0	390	75	
821260	HATTON	C1017772	HRW	8.25					
821261	TYEE	C1017773	CLUB	8.98	1335	79.0	385	78	
821262	LEWJAIN	C1017909	SWW	8.93	1300	73.0	366	70	
821263	GREW	C1017951	CLUB	8.77	1295	74.0	378	75	
821264	HILL 81 (OR68007)	C1017954	SWW	8.86	1285	74.0	378	74	
821265	JACMAR	WA6585	CLUB	9.33	1370	83.0	369	71	
821266		WA6696	SWW	8.48	1220	68.0	374	76	
821267	PEAK 72 --PULLMAN, SPRING--	C015319	HRS	8.05					
821268	WARED	C1015926	HRS	8.19					
821269	URQUIE	C1017413	SWS	8.90	1335	75.0	365	68	
821270	WAMPUM	C1017691	HRS	8.43					
821271	DIRKWIN	C1017745	SWS	8.55	1290	74.0	376	69	
821272	MCKAY	C1017903	HRS	8.24					
821273	OWENS	C1017904	SWS	8.87	1375	79.0	383	73	
821274	WAVERLY	C1017911	SWS	8.96	1330	75.0	373	72	
821275		WA6831	SWS	8.83	1330	78.0	394	72	
821276		K795138	SWS	8.73	1310	78.0	369	65	
821277		K795139	SWS	8.50	1305	77.0	381	68	
821278	MORO --LIND, WINTER--	C1013740	CLUB	9.07	1295	73.0	405	71	
821279	MCCALL	C1013842	HRW	8.25					
821280	WANSER	C1013844	HRW	8.23					
821281	NUGAINES	C1013968	SWW	8.61	1300	74.0	390	73	
821282	LUKE	C1014586	SWW	8.99	1360	79.0	395	78	
821283	SPRAGUE	C1015376	SWW	8.84	1350	77.0	378	72	
821284	BARBEE	C1017417	CLUB	9.03	1370	81.0	404	81	
821285	DAWS	C1017419	SWW	8.67	1285	76.0	388	79	



NURSCO 51

PULLMAN, LIND WA

LABNUM	VARIETY	IDNO	CLASS	WPROT	FYELD	FASH 1/	MSCOR	FMIST	FPROT 1/	AGTRO
821286	STEPHENS	C1017569	SWW	12.7	69.5	0.41	80.1	12.8	11.7	78.0
821287	FARO	C1017590	CLUB	13.1	69.5	0.42	79.2	12.8	11.0	76.5
821288	HATTON	C1017772	HRW	13.1	69.3	0.39	82.7	13.7	13.0	73.5
821289	TYEE	C1017773	CLUB	13.2	71.6	0.39	85.0	13.0	11.2	69.0
821290	LEWJAIN	C1017909	SWW	13.3	67.5	0.37	77.3	12.8	11.7	74.0
821291	CREW	C1017951	CLUB	12.9	72.0	0.43	82.7	13.0	11.7	70.0
821292	HILL 81 (OR68007)	C1017954	SWW	13.6	71.6	0.39	71.2	13.2	12.2	74.5
821293	JACMAR	WA6585	CLUB	13.2	69.1	0.44	77.2	13.2	12.0	69.0
821294		WA6696	SWW	13.0	67.7	0.42	75.7	13.0	11.4	76.0
821295		WA6816	HRW	13.1	74.3	0.41	89.7	13.2	12.6	69.3
821296		WA6819	SWW	12.2	69.5	0.40	79.8	12.9	11.1	78.5
821297		OR7925	HRW	13.4	74.3	0.47	86.7	13.6	12.9	63.0
821298	MARFED --LIND, SPRING--	C1011919	SWS	13.6	67.0	0.38	74.6	12.9	11.3	70.0
821299	TWIN	C1014588	SWS	13.7	68.5	0.39	79.0	13.1	12.4	75.0
821300	WARED	C1015926	HRS	14.6	71.1	0.39	85.6	13.5	12.7	78.5
821301	BORAH	C1017267	HRS	14.3	69.6	0.33	85.5	13.8	13.7	71.0
821302	FIELDER	C1017268	SWS	13.3	69.0	0.35	82.0	13.1	11.4	69.5
821303	URQUIE	C1017413	SWS	12.6	71.8	0.38	85.1	13.2	11.2	76.0
821304	SAWTELL	C1017424	HRS	14.1	71.3	0.39	85.6	13.7	13.8	65.5
821305	WAMPUM	C1017691	HRS	13.9	71.2	0.42	84.1	13.7	13.1	65.0
821306	DIRKWIN	C1017745	SWS	14.1	68.6	0.38	80.8	13.5	12.6	70.5
821307	MCKAY	C1017903	HRS	14.3	70.8	0.35	87.6	14.0	13.1	70.0
821308	OWENS	C1017904	SWS	13.2	69.0	0.36	82.0	12.8	11.6	71.0
821309	WAVERLY	C1017911	SWS	13.9	71.3	0.37	84.8	12.8	11.7	82.0
821310		WA6831	SWS	12.9	69.9	0.38	81.8	12.9	10.8	71.0

COMMENTS: The wheats in this nursery were grown at the request of the Western Wheat Quality Laboratory by the Agronomy and Soils Department, Washington State University. They represent all the important varieties grown in the Pacific Northwest and are used for numerous research projects.



DRILL STRIPS

NURSCO 51

PULLMAN, LIND WA

LABNUM	VARIETY	IDNO	CLASS	MABSC 3/	MTYPE	FABS	FPEAK	FSTAB	VISC	VISCC
821286	STEPHENS	C1017569	SWW	54.9	2M				176	158
821287	FARO	C1017590	CLUB	51.6	4M				180	180
821288	HATTON	C1017772	HRW	60.7	4M	63.7	7.3	11.8		
821289	TYEE	C1017773	CLUB	51.6	3M				160	155
821290	LEWJAIN	C1017909	SWW	57.9	3M				175	157
821291	CREW	C1017951	CLUB	50.1	2M				118	106
821292	HILL 81 (OR68007)	C1017954	SWW	54.4	2M				181	151
821293	JAGMAR	WA6585	CLUB	56.6	2M				138	119
821294		WA6696	SWW	54.4	3M				184	173
821295		WA6816	HRW			64.9	3.6	4.4	262	207
821296		WA6819	SWW	55.1	2M				166	163
821297		OR7925	HRW			61.7	6.7	12.0	261	199
821298	MARFED --LIND, SPRING--	C1011919	SWS	59.9	4M				286	272
821299	TWIN	C1014588	SWS	55.1	1H				222	180
821300	WARED	C1015926	HRS	61.2	4H	64.3	9.4	9.7		
821301	BORAH	C1017267	HRS	62.1	4H	66.8	9.7	10.1		
821302	FIELDER	C1017268	SWS	53.1	1H				228	214
821303	URQUIE	C1017413	SWS	58.4	1H				232	224
821304	SAWTELL	C1017424	HRS	62.4	5H	65.2	14.2	16.1		
821305	WAMPUM	C1017691	HRS	61.6	4H	64.5	11.6	12.2		
821306	DIRKWIN	C1017745	SWS	56.8	1H				248	196
821307	MCKAY	C1017903	HRS	62.4	6H	65.1	14.3	17.1		
821308	OWENS	C1017904	SWS	56.5	1H				239	218
821309	WAVERLY	C1017911	SWS	55.9	1H				256	229
821310		WA6831	SWS	55.4	1H				186	192





DRILL STRIPS

NURSCO 51

PULLMAN, LIND WA

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC 3/	MTIME	LVOL	LVOLC 4/	BCRGR	CODI
821286 STEPHENS		CI017569	SWW	54.8	54.1	1.4	1020	978	4	8.70
821287 FARO		CI017590	CLUB	50.8	50.8	1.6	960	960	4	8.90
821288 HATTON		CI017772	HRW	62.9	60.9	2.3	1030	906	2	8.36
821289 TYEE		CI017773	CLUB	53.0	52.8	2.2	910	899	6	8.79
821290 LEWJAIN		CI017909	SWW	57.8	57.1	1.8	1010	968	2	9.02
821291 CREW		CI017951	CLUB	50.5	49.8	1.2	840	802	8	8.96
821292 HILL 81 (OR68007)		CI017954	SWW	53.8	52.6	1.0	995	923	4	8.66
821293 JACMAR		WA6585	CLUB	55.8	54.8	1.1	920	865	8	9.04
821294		WA6696	SWW	54.5	54.1	1.6	1000	976	4	8.46
821295		WA6816	HRW	63.2	61.6	1.3	1140	1041	2	8.30
821296		WA6819	SWW	53.4	53.3	1.8	990	984	6	8.65
821297		OR7925	HRW	66.1	64.2	3.2	1133	1015	2	7.97
821298 MARFED --LIND, SPRING--		CI011919	SWS	60.4	60.1	2.1	1005	987	2	8.37
821299 TWIN		CI014588	SWS	54.7	53.3	1.0	920	836	6	8.79
821300 WARED		CI015926	HRS	65.1	63.4	2.9	1040	935	2	8.02
821301 BORAH		CI017267	HRS	67.0	64.3	2.8	1090	923	2	7.96
821302 FIELDER		CI017268	SWS	52.7	52.3	1.0	870	846	8	8.70
821303 URQUIE		CI017413	SWS	57.8	57.6	1.0	995	983	4	8.27
821304 SAWTELL		CI017424	HRS	67.4	64.6	4.2	1015	841	2	7.72
821305 WAMPUM		CI017691	HRS	64.9	62.8	3.3	1015	885	2	8.04
821306 DIRKWIN		CI017745	SWS	56.6	55.0	1.0	965	869	9	8.24
821307 MCKAY		CI017903	HRS	66.7	64.6	5.0	1055	925	2	7.91
821308 OWENS		CI017904	SWS	56.3	55.7	1.1	1000	964	2	8.52
821309 WAVERLY		CI017911	SWS	57.3	56.6	1.2	990	948	2	8.44
821310		WA6831	SWS	53.9	54.1	1.0	925	937	6	8.61



DRILL STRIPS

NURSCO 51

PULLMAN, LIND WA

LABNUM	VARIETY	IDNO	CLASS	CODIG 4/	CAVOL	SCSOR	WTIN	NOSCO	RMKS
821286 STEPHENS		CI017569	SWW	8.78	1340	78.0	392	75	
821287 FARO		CI017590	CLUB	8.90	1320	73.0	388	73	
821288 HATTON		CI017772	HRW	8.52					
821289 TYEE		CI017773	CLUB	8.80	1280	73.0	368	71	
821290 LEWJAIN		CI017909	SWW	9.10	1430	84.0	380	73	
821291 CREW		CI017951	CLUB	9.01	1365	79.0	381	71	
821292 HILL 81 (OR68007)		CI017954	SWW	8.79	1345	78.0	390	69	
821293 JACMAR		WA6585	CLUB	9.11	1380	78.0	394	70	
821294		WA6696	SWW	8.51	1335	77.0	377	75	
821295		WA6816	HRW	8.43					
821296		WA6819	SWW	8.66	1350	77.0	387	73	
821297		OR7925	HRW	8.13					
821298 MARFED --LIND, SPRING--		CI011919	SWS	8.41	1360	81.0	360	72	
821299 TWIN		CI014588	SWS	9.00	1320	79.0	372	76	
821300 WARED		CI015926	HRS	8.16					
821301 BORAH		CI017267	HRS	8.18					
821302 FIELDER		CI017268	SWS	8.74	1370	81.0	391	73	
821303 URQUIE		CI017413	SWS	8.30	1350	78.0	374	75	
821304 SAWTELL		CI017424	HRS	7.95					
821305 WAMPUM		CI017691	HRS	8.21					
821306 DIRKWIN		CI017745	SWS	8.41	1320	78.0	382	72	
821307 MCKAY		CI017903	HRS	8.08					
821308 OWENS		CI017904	SWS	8.59	1375	80.0	391	80	
821309 WAVERLY		CI017911	SWS	8.51	1300	76.0	369	79	
821310		WA6831	SWS	8.59	1275	73.0	384	80	



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LIND, WA

E. DONALDSON

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	MTYPE
821311		6/ N8200101	HRW	61.2	72.8	0.37	89.3	11.4	60.2	4M
821312		6/ N8200102	HRW	61.2	72.6	0.36	89.6	11.3	59.3	4M
821313		6/ N8200201	HRW	63.2	74.6	0.35	92.2	11.2	60.7	5H
821314		6/ N8200202	HRW	62.4	72.4	0.32	91.1	10.7	60.6	3H
821315		5/ N8200301	HRW	61.2	70.4	0.37	86.8	12.0	60.2	4H
821316		N8200401	HRW	63.2	73.4	0.32	92.3	9.8	59.5	2H
821317		N8200402	HRW	62.0	73.6	0.32	92.5	10.8	60.5	2H
821318		N8200501	HRW	61.6	72.0	0.38	87.6	10.9	59.9	2H
821319		5/ N8200502	HRW	62.8	71.6	0.34	89.2	11.2	59.9	3H
821320		5/ N8200601	HRW	62.4	71.4	0.37	87.8	11.6	62.6	5H
821321	HATTON	C1017772	HRW	63.6	72.5	0.36	89.3	12.4	60.3	3H
821322		6/ N8200602	HRW	61.6	74.0	0.34	91.9	12.0	62.0	2H
821323		6/ N8200701	HRW	62.0	70.9	0.33	89.4	11.3	57.7	6M
821324		6/ N8200801	HRW	62.4	70.1	0.35	87.3	12.0	60.0	6M
821325		5/ N8200802	HRW	62.4	72.3	0.33	90.8	11.5	60.2	4H
821326		5/ N8200803	HRW	62.4	73.0	0.32	91.8	10.7	59.3	4M
821327		5/ N8200804	HRW	62.0	69.5	0.32	88.2	12.1	59.4	8M
821328		5/ N8200805	HRW	62.0	70.0	0.36	86.5	11.0	59.9	8M
821329		5/ N8200935	HRW	61.2	72.7	0.33	91.3	12.8	62.1	4H
821330		5/ N8200901	HRW	62.0	73.3	0.29	93.6	10.3	60.2	2H
821331		N8200902	HRW	62.0	72.6	0.28	93.6	10.3	60.7	4M
821332		6/ N8200903	HRW	62.0	73.2	0.29	93.6	10.4	61.3	4M
821333		5/ N8200904	HRW	61.6	73.0	0.29	93.3	10.6	60.4	4M
821334		N8200905	HRW	62.4	73.4	0.29	94.0	10.3	60.6	4M
821335		N8200906	HRW	63.2	73.8	0.28	94.6	10.3	60.7	3M
821336		N8200907	HRW	62.8	73.1	0.28	94.3	10.0	60.4	3M
821337		N8200908	HRW	62.4	73.1	0.31	92.3	10.1	59.9	3M
821338		N8200909	HRW	62.4	73.5	0.33	92.1	10.0	59.4	2H
821339		N8200910	HRW	62.4	73.0	0.32	91.7	10.4	60.5	3M
821340		N8200911	HRW	62.8	73.9	0.32	93.1	10.6	60.7	2H
821341		5/ N8200912	HRW	62.4	73.9	0.30	93.7	10.6	61.2	2H
821342		5/ N8200913	HRW	63.2	73.9	0.32	93.1	10.3	61.1	2H
821343		5/ N8200914	HRW	62.4	74.2	0.32	93.3	10.7	61.3	2H
821344		5/ N8200915	HRW	62.0	74.4	0.32	93.5	10.6	61.1	2H
821345		6/ N8200916	HRW	62.4	74.4	0.31	93.9	10.5	60.7	2H

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 11% Protein.

4/ Observed Values Corrected to 11% Protein.

5/ Particularly Promising Overall Quality Characteristics.

6/ Promising Overall Quality Characteristics.



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LIND, WA

E. DONALDSON

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC 3/	MTIME	LVOL	LVOLC 4/	BCRGR	RMKS
821311		N8200101	HRW	61.8	61.4	3.6	958	933	2	
821312		N8200102	HRW	61.1	60.8	3.1	958	939	2	Q-BCRGR
821313		N8200201	HRW	63.1	62.9	5.0	955	943	3	Q-BCRGR
821314		N8200202	HRW	61.0	61.3	2.7	905	924	2	
821315		N8200301	HRW	63.4	62.4	5.3	1005	943	2	
821316		N8200401	HRW	59.5	60.7	2.8	880	954	6	P-BCRGR
821317		N8200402	HRW	61.5	61.7	2.6	930	942	5	P-BCRGR
821318		N8200501	HRW	61.0	61.1	2.9	905	911	7	P-BCRGR
821319		N8200502	HRW	60.8	60.6	3.6	1070	1058	2	
821320		N8200601	HRW	64.4	63.8	4.6	1065	1028	2	
821321	HATTON	C1017772	HRW	61.9	60.5	3.0	1003	916	2	
821322		N8200602	HRW	63.2	62.2	2.2	1018	956	3	Q-BCRGR
821323		N8200701	HRW	58.7	58.4	3.6	990	971	2	
821324		N8200801	HRW	62.2	61.2	3.7	1015	953	2	
821325		N8200802	HRW	62.9	62.4	4.4	1090	1059	2	
821326		N8200803	HRW	61.2	61.5	3.8	970	989	2	
821327		N8200804	HRW	62.7	61.6	5.4	1010	942	2	
821328		N8200805	HRW	62.1	62.1	4.3	1050	1050	1	
821329		N8200935	HRW	64.1	62.3	3.1	1015	903	2	
821330		N8200901	HRW	60.7	61.4	2.6	980	1023	2	
821331		N8200902	HRW	60.7	61.4	2.8	1010	1053	5	P-BCRGR
821332		N8200903	HRW	62.9	63.5	2.6	975	1012	3	Q-BCRGR
821333		N8200904	HRW	61.2	61.6	2.7	980	1005	2	
821334		N8200905	HRW	61.1	61.8	2.6	950	993	4	P-BCRGR
821335		N8200906	HRW	62.2	62.9	2.7	970	1013	4	
821336		N8200907	HRW	61.6	62.6	2.7	950	1012	5	P-BCRGR
821337		N8200908	HRW	61.2	62.1	2.9	950	1006	4	P-BCRGR
821338		N8200909	HRW	60.6	61.6	2.7	925	987	4	P-BCRGR
821339		N8200910	HRW	61.1	61.7	2.6	975	1012	5	P-BCRGR
821340		N8200911	HRW	61.5	61.9	2.5	950	975	4	P-BCRGR
821341		N8200912	HRW	62.0	62.4	2.0	935	960	2	
821342		N8200913	HRW	61.6	62.3	2.4	940	983	2	
821343		N8200914	HRW	62.2	62.5	2.3	970	989	2	
821344		N8200915	HRW	61.9	62.3	2.0	940	965	4	P-BCRGR
821345		N8200916	HRW	61.4	61.9	2.1	955	986	3	Q-BCRGR





NURSCO 52

LIND, WA

E. DONALDSON

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	MTYPE
821346		5/N8200917	HRW	63.0	74.2	0.32	93.1	10.7	62.1	2H
821347		6/N8200918	HRW	63.0	73.9	0.31	93.2	10.6	61.7	2H
821348		6/N8200919	HRW	62.8	74.8	0.32	94.0	10.7	61.6	2H
821349		6/N8200920	HRW	62.8	74.5	0.32	93.6	10.4	59.9	2H
821350		5/N8200921	HRW	63.0	75.2	0.32	94.2	10.6	60.7	2H
821351		6/N8200922	HRW	62.8	74.3	0.32	93.4	10.5	60.6	2H
821352		6/N8200923	HRW	62.4	74.4	0.32	93.3	10.6	61.7	2H
821353	HATTON	6/C1017772	HRW	63.8	73.3	0.36	90.2	11.9	62.1	4H
821354		6/N8201001	HRW	62.6	72.5	0.38	88.3	11.4	59.8	3H
821355		6/N8201101	HRW	62.0	72.8	0.37	88.9	11.9	62.1	5H
821356		5/N8201102	HRW	62.0	74.2	0.36	91.0	11.6	60.8	5H
821357		6/N8201103	HRW	63.2	74.6	0.37	91.1	10.7	62.7	5H
821358		6/N8201104	HRW	61.1	73.0	0.36	89.8	11.4	60.0	5H
821359		6/N8201105	HRW	63.6	74.0	0.36	90.8	11.3	59.2	5H
821360		6/N8201106	HRW	62.8	73.4	0.36	90.2	11.1	58.7	5H
821361		6/N8201107	HRW	62.4	73.6	0.36	90.6	12.8	61.0	5H
821362		5/N8201108	HRW	62.0	72.8	0.37	89.2	12.0	60.3	4H
821363		5/N8201109	HRW	62.4	72.7	0.39	87.8	11.6	59.7	5H
821364		5/N8201110	HRW	62.0	72.1	0.37	88.2	11.3	60.0	6H
821365		5/N8201111	HRW	63.6	73.7	0.36	90.5	10.3	62.0	5H
821366		6/N8201112	HRW	62.0	72.2	0.38	88.0	12.1	60.3	4H
821367		6/N8201113	HRW	63.2	72.5	0.34	90.2	10.9	61.5	5H
821368		6/N8201114	HRW	62.4	73.5	0.35	91.1	11.6	62.8	5H
821369		6/N8201201	HRW	62.8	73.7	0.35	91.2	11.1	62.3	5H
821370		5/N8201202	HRW	61.2	69.5	0.36	86.4	10.7	60.1	5H
821371		6/N8201203	HRW	62.2	73.2	0.39	88.5	11.4	60.9	5H
821372		6/N8201301	HRW	63.2	73.1	0.36	89.9	11.7	62.8	4H
821373		6/N8201302	HRW	62.2	72.7	0.37	89.1	11.4	63.4	4H
821374		6/N8201303	HRW	63.0	73.3	0.37	89.4	11.5	63.5	4H
821375		6/N8201401	HRW	62.6	71.2	0.35	88.3	12.1	64.4	4H
821376		6/N8201501	HRW	63.0	72.9	0.35	90.2	10.8	63.2	5H
821377		6/N8201502	HRW	63.0	74.3	0.35	91.5	11.3	64.5	5H
821378		6/N8201503	HRW	62.6	72.7	0.37	89.1	12.0	61.4	5H
821379		5/N8201504	HRW	62.2	72.7	0.37	89.0	11.7	62.7	4H
821380		5/N8201505	HRW	63.6	72.7	0.36	89.7	11.3	60.6	5H

## COMMENTS:

This nursery contains about 350 hard red winter selections. Quality varied from very good to very poor.

Footnotes in the Table (IDNO) identify the promising selections. Many of these were outstanding in milling, such as those on mid-page of page 1 and page 10. Page 10 contained some soft red and white wheats which were not evaluated for pastry properties at this time. See "REMARKS" column for deficiencies, where Q = Questionable, P = Poor, and VP = Very Poor.



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LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR	RMKS
					<u>3/</u>			<u>4/</u>		
821346		N8200917	HRW	62.5	62.8	2.1	955	974	2	Q-BCRGR
821347		N8200918	HRW	62.0	62.4	2.1	930	955	3	Q-BCRGR
821348		N8200919	HRW	61.5	61.8	2.0	925	944	3	Q-BCRGR
821349		N8200920	HRW	61.5	62.1	2.1	945	982	3	Q-BCRGR
821350		N8200921	HRW	61.5	61.9	2.3	930	955	2	
821351		N8200922	HRW	61.3	61.8	2.0	950	981	4	P-BCRGR
821352		N8200923	HRW	61.0	61.4	2.2	940	965	3	
821353	HATTON	C1017772	HRW	64.2	63.3	2.6	970	914	2	
821354		N8201001	HRW	61.4	61.0	2.7	960	935	2	
821355		N8201101	HRW	65.2	64.3	4.6	993	937	2	
821356		N8201102	HRW	63.6	63.0	5.1	978	941	2	
821357		N8201103	HRW	63.1	63.4	4.8	950	969	3	
821358		N8201104	HRW	62.6	62.2	4.8	983	958	2	
821359		N8201105	HRW	61.7	61.4	4.0	975	956	2	
821360		N8201106	HRW	61.0	60.9	4.5	935	929	2	
821361		N8201107	HRW	65.0	63.2	4.8	990	878	2	
821362		N8201108	HRW	64.8	63.8	6.0	1020	958	2	
821363		N8201109	HRW	62.5	61.9	4.3	975	938	4	P-BCRGR
821364		N8201110	HRW	63.0	62.7	6.7	1045	1026	2	
821365		N8201111	HRW	63.5	64.2	4.5	945	988	5	P-BCRGR
821366		N8201112	HRW	63.6	62.5	4.2	978	910	2	
821367		N8201113	HRW	64.6	64.7	4.8	945	951	3	Q-BCRGR
821368		N8201114	HRW	66.6	66.0	5.8	975	938	2	
821369		N8201201	HRW	65.6	65.5	5.3	950	944	2	
821370		N8201202	HRW	63.5	63.8	4.7	970	989	3	Low FYELD,BCRGR
821371		N8201203	HRW	62.0	61.6	4.2	953	928	2	
821372		N8201301	HRW	65.2	64.5	3.9	995	952	3	Q-BCRGR
821373		N8201302	HRW	64.0	63.6	3.0	975	950	2	
821374		N8201303	HRW	64.7	64.2	3.5	985	954	2	
821375		N8201401	HRW	64.7	63.6	2.4	1020	952	3	Q-BCRGR
821376		N8201501	HRW	65.2	65.4	5.6	945	957	2	
821377		N8201502	HRW	65.0	64.7	5.3	920	901	2	Low LVOL
821378		N8201503	HRW	64.6	63.6	5.3	970	908	3	Q-BCRGR
821379		N8201504	HRW	64.1	63.4	3.6	1000	957	3	Q-BCRGR
821380		N8201505	HRW	64.1	63.8	4.8	940	921	4	P-BCRGR



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LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH <u>1/</u>	MSCOR	FPROT <u>1/</u>	MABSC <u>3/</u>	MTYPE
821381	HATTON	5/ N8201506	HRW	63.2	74.5	0.36	91.5	12.1	63.3	4H
821382		6/ N8201507	HRW	63.0	72.2	0.35	89.3	11.4	62.8	7H
821383		C11017772	HRW	63.0	73.0	0.36	89.6	12.0	63.7	4H
821384		6/ N8201601	HRW	61.8	72.8	0.39	88.0	11.9	63.1	5H
821385		6/ N8201603	HRW	64.8	71.0	0.33	89.0	12.8	63.4	5H
821386		6/ N8201602	HRW	61.4	72.3	0.36	89.0	11.2	63.0	4H
821387		N8201701	HRW	61.6	70.2	0.40	85.0	12.4	62.1	2H
821388		N8201801	HRW	61.2	74.1	0.36	90.8	11.5	61.8	2H
821389		6/ N8201802	HRW	63.0	73.1	0.33	91.4	10.1	63.0	5H
821390		6/ N8201901	HRW	61.4	72.3	0.35	89.6	11.3	62.9	2H
821391		6/ N8201911	HRW	62.0	72.7	0.35	89.9	11.2	63.6	5H
821392		N8201902	HRW	61.8	70.3	0.35	87.8	10.7	64.6	5H
821393		6/ N8201903	HRW	62.8	72.8	0.36	89.7	10.7	63.1	5H
821394		N8201904	HRW	62.6	72.0	0.36	88.9	10.4	62.9	5H
821395		N8201905	HRW	61.8	72.3	0.36	88.8	11.9	61.3	2H
821396		6/ N8201906	HRW	63.8	72.5	0.37	88.7	11.5	63.7	5H
821397		5/ N8201907	HRW	61.8	71.1	0.36	87.8	11.3	63.9	5H
821398		5/ N8201908	HRW	62.6	74.3	0.36	91.3	12.1	61.6	4H
821399		6/ N8202001	HRW	61.8	74.4	0.35	91.7	12.2	62.5	3H
821400		6/ N8202002	HRW	62.0	74.4	0.36	91.4	11.8	61.3	2H
821401	HATTON	N8202003	HRW	62.2	74.8	0.39	90.3	11.6	61.2	3H
821402		6/ N8202101	HRW	61.4	72.1	0.35	89.3	10.8	60.3	6M
821403		6/ N8202201	HRW	63.0	73.1	0.36	89.9	11.7	64.3	5H
821404		6/ C1017772	HRW	63.8	73.1	0.37	89.5	11.9	63.4	4H
821405		6/ N8202202	HRW	61.2	73.2	0.38	88.8	11.4	60.2	4H
821406		5/ N8202203	HRW	61.2	73.4	0.36	90.5	12.0	64.4	5H
821407		N8202301	HRW	62.0	72.1	0.36	88.8	11.8	61.7	2H
821408		5/ N8202302	HRW	62.0	74.4	0.36	91.2	11.6	63.9	5H
821409		N8202303	HRW	62.0	74.3	0.38	90.4	11.6	61.8	4H
821410		6/ N8202401	HRW	62.6	75.9	0.37	92.2	10.6	61.8	6M
821411		N8202402	HRW	61.2	71.9	0.37	88.2	10.8	60.9	4M
821412		5/ N8202403	HRW	61.2	74.0	0.38	90.0	10.8	63.4	5H
821413		5/ N8202501	HRW	62.2	74.1	0.37	90.3	11.0	61.7	6M
821414		N8202502	HRW	62.2	73.7	0.37	89.8	10.6	61.7	4H
821415		N8204802	HRW	62.2	72.2	0.37	88.6	12.1	62.6	3H





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LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC 3/	MTIME	LVOL	LVOLC 4/	BCRGR	RMKS
821381	HATTON	N8201506	HRW	64.6	63.5	3.5	1030	962	2	
821382		N8201507	HRW	64.4	64.0	8.6	965	940	3	
821383		C11017772	HRW	65.4	64.4	3.2	1000	938	4	P-BCRGR
821384		N8201601	HRW	65.2	64.3	4.3	975	919	2	
821385		N8201603	HRW	65.9	64.1	3.5	1010	898	2	
821386		N8201602	HRW	63.9	63.7	3.1	955	943	2	
821387		N8201701	HRW							P-MIXO, FYELD
821388		N8201801	HRW	63.5	63.0	2.0	975	944	3	P-MIXO, Q-BCRGR
821389		N8201802	HRW	64.3	65.2	4.2	945	1001	3	Q-BCRGR
821390		N8201901	HRW	64.4	64.1	2.5	990	971	3	Q-BCRGR
821391		N8201911	HRW	67.0	66.8	5.4	955	943	2	
821392		N8201902	HRW	67.5	67.8	5.0	970	989	3	Q-FYELD, BCRGR
821393		N8201903	HRW	66.0	66.3	5.8	975	994	3	
821394		N8201904	HRW	65.5	66.1	6.0	970	1007	3	Q-BCRGR
821395		N8201905	HRW	63.4	62.5	2.0	990	934	4	P-BCRGR
821396		N8201906	HRW	66.9	66.4	4.4	985	954	3	Q-BCRGR
821397		N8201907	HRW	67.4	67.1	4.8	1000	981	2	
821398		N8201908	HRW	64.9	63.8	4.4	1020	952	2	
821399		N8202001	HRW	62.9	61.7	2.6	945	871	2	
821400		N8202002	HRW	62.3	61.5	2.3	935	885	3	Q-BCRGR
821401		N8202003	HRW	61.5	60.9	2.5	910	873	3	Q-LVOL, BCRGR
821402		N8202101	HRW	60.3	60.5	3.7	950	962	2	
821403		N8202201	HRW	67.2	66.5	5.0	1055	1012	3	Q-BCRGR
821404		C1017772	HRW	64.5	63.6	2.7	988	932	2	
821405		N8202202	HRW	60.8	60.4	3.9	973	948	3	Q-BCRGR
821406		N8202203	HRW	62.6	61.6	4.0	1008	946	2	
821407		N8202301	HRW	62.7	61.9	2.1	950	900	6	P-MIXO, BCRGR
821408		N8202302	HRW	63.2	62.6	3.6	960	923	2	
821409		N8202303	HRW	60.6	60.0	3.0	968	931	4	P-BCRGR
821410		N8202401	HRW	59.6	60.0	3.1	905	930	3	Q-BCRGR
821411		N8202402	HRW	59.4	59.6	2.0	890	902	5	P-LVOL, BCRGR
821412		N8202403	HRW	63.4	63.6	3.8	960	972	2	
821413		N8202501	HRW	61.9	61.9	3.9	1000	1000	2	
821414		N8202502	HRW	61.5	61.9	3.3	940	965	4	P-BCRGR
821415		N8204802	HRW	62.7	61.6	2.4	928	860	4	P-BCRGR



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LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	MTYPE
821416		5/ N8202606	HRW	62.6	73.9	0.35	91.0	11.5	62.7	3H
821417		N8202607	HRW	63.2	74.1	0.35	91.2	11.5	60.7	6M
821418		N8202601	HRW	61.0	73.0	0.34	90.6	11.5	63.6	3H
821419		N8202602	HRW	64.0	74.8	0.34	92.6	10.6	60.1	2H
821420		N8202706	HRW	62.6	74.1	0.33	92.6	10.3	60.8	6M
821421		N8202701	HRW	61.8	72.5	0.35	89.9	11.9	61.6	3M
821422		N8202702	HRW	62.2	73.5	0.36	90.4	11.6	63.9	4M
821423		N8202703	HRW	62.2	72.3	0.36	89.0	12.1	61.5	2H
821424		N8202704	HRW	62.4	73.2	0.37	89.7	11.1	61.5	2H
821425		N8202801	HRW	60.6	72.1	0.37	88.5	11.6	61.6	4M
821426		6/ N8202802	HRW	62.4	74.1	0.37	90.2	11.7	60.5	4M
821427		6/ N8202803	HRW	60.2	71.8	0.35	89.1	11.1	61.1	4M
821428		6/ N8202901	HRW	62.2	73.6	0.36	90.4	11.9	60.6	4M
821429		6/ N8202902	HRW	60.6	74.0	0.38	89.6	12.5	63.0	4H
821430		6/ N8202903	HRW	61.8	73.5	0.38	89.2	12.0	61.1	3H
821431	HATTON	6/ C1017772	HRW	63.6	73.4	0.37	89.9	11.6	61.8	2H
821432		N8203001	HRW	62.2	73.3	0.35	90.7	10.9	60.6	2H
821433		N8203002	HRW	61.8	73.1	0.35	90.2	11.8	61.7	2H
821434		6/ N8203003	HRW	62.8	73.6	0.35	90.8	11.6	62.9	2H
821435		N8203004	HRW	62.8	71.8	0.36	88.4	10.7	59.6	3M
821436		6/ N8205901	HRW	61.6	64.7	0.37	80.5	11.5	62.3	3H
821437		6/ N8203107	HRW	62.6	71.9	0.36	88.4	12.5	63.2	5H
821438		N8203101	HRW	62.6	71.9	0.36	88.4	11.8	62.3	5H
821439		N8203102	HRW	61.8	72.7	0.36	89.3	10.5	60.1	6M
821440		N8201614	HRW	61.6	72.1	0.36	88.9	12.5	62.5	2H
821441		N8201604	HRW	61.4	73.7	0.36	90.8	12.3	62.0	3M
821442		N8203201	HRW	62.2	72.0	0.36	89.0	11.4	62.4	3H
821443		N8203301	HRW	61.6	73.2	0.39	88.2	11.6	61.1	1H
821444		N8203401	HRW	61.2	73.3	0.36	90.0	10.1	60.5	3M
821445		N8203405	HRW	61.8	70.3	0.40	84.7	11.1	61.6	4H
821446		N8203402	HRW	61.4	73.4	0.37	89.8	10.5	61.3	4M
821447		N8203501	HRW	61.6	71.8	0.37	88.2	11.7	60.4	1H
821448		N8203502	HRW	61.8	72.9	0.37	89.0	12.2	61.5	1H
821449		N8203503	HRW	61.6	71.6	0.37	88.0	11.3	59.7	1H
821450		N8203504	HRW	62.0	71.9	0.37	87.9	11.9	60.2	1H



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LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR	RMKS
					<u>3/</u>			<u>4/</u>		
821416		N8202606	HRW	61.4	60.9	3.4	990	959	2	Q-LVOL,BCRGR
821417		N8202607	HRW	59.4	58.9	2.3	925	894	3	P-BCRGR
821418		N8202601	HRW	60.3	59.8	1.6	890	859	8	P-BCRGR
821419		N8202602	HRW	56.9	57.3	1.1	885	910	8	P-BCRGR
821420		N8202706	HRW	60.3	61.0	3.1	910	953	5	P-BCRGR
821421		N8202701	HRW	61.7	60.8	2.0	985	929	6	P-BCRGR
821422		N8202702	HRW	61.2	60.6	2.2	940	903	6	P-BCRGR
821423		N8202703	HRW	62.8	61.7	2.4	1020	952	2	
821424		N8202704	HRW	60.8	60.7	1.9	960	954	2	P-MIXO
821425		N8202801	HRW	61.4	60.8	3.3	915	878	6	P-BCRGR
821426		N8202802	HRW	60.4	59.7	2.7	985	942	2	
821427		N8202803	HRW	59.4	59.3	2.5	950	944	2	
821428		N8202901	HRW	61.7	60.8	2.6	1000	944	2	
821429		N8202902	HRW	62.7	61.2	3.2	1010	917	2	
821430		N8202903	HRW	62.3	61.3	2.8	985	923	2	
821431	HATTON	C1017772	HRW	62.6	62.0	2.7	955	918	2	
821432		N8203001	HRW	60.7	60.8	2.6	935	941	2	
821433		N8203002	HRW	59.7	58.9	1.1	920	870	6	P-LVOL,BCRGR
821434		N8203003	HRW	62.7	62.1	1.9	950	913	2	
821435		N8203004	HRW	58.5	58.8	1.5	900	919	6	P-LVOL,BCRGR
821436		N8205901	HRW	63.0	62.5	2.5	910	879	6	P-FYELD,BCRGR
821437		N8203107	HRW	64.9	63.4	4.1	980	887	2	
821438		N8203101	HRW	62.3	61.5	3.6	960	910	2	
821439		N8203102	HRW	58.8	59.3	2.8	910	941	2	
821440		N8201614	HRW	60.2	58.7	1.6	935	842	6	P-MIXO,BCRGR
821441		N8201604	HRW	58.0	56.7	1.5	890	809	6	P-MIXO,BCRGR
821442		N8203201	HRW	62.0	61.6	2.2	905	880	2	P-LVOL
821443		N8203301	HRW	58.9	58.3	1.0	855	818	6	P-MIXO,BCRGR
821444		N8203401	HRW	56.8	57.7	1.3	875	931	5	P-MIXO,BCRGR
821445		N8203405	HRW	61.9	61.8	2.6	915	909	4	P-MIXO,BCRGR
821446		N8203402	HRW	61.0	61.5	2.3	885	916	6	P-MIXO,BCRGR
821447		N8203501	HRW	58.3	57.6	1.0	825	782	8	P-MIXO,BCRGR
821448		N8203502	HRW	59.2	58.0	1.0	785	711	9	P-MIXO,BCRGR
821449		N8203503	HRW	57.2	56.9	1.0	800	781	9	P-MIXO,BCRGR
821450		N8203504	HRW	58.3	57.4	1.0	820	764	8	P-MIXO,BCRGR



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LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	MTYPE
821451	HATTON	6/ N8203505	HRW	62.0	71.7	0.37	88.0	11.0	60.6	1H
821452		N8203506	HRW	61.8	73.3	0.35	90.7	11.9	60.2	4H
821453		N8203507	HRW	61.4	72.5	0.39	88.0	12.3	60.0	1H
821454		C1017772	HRW	63.4	72.4	0.38	88.1	11.4	62.9	4H
821455		6/ N8203508	HRW	63.4	71.6	0.37	88.0	10.3	59.9	4M
821456		N8203509	HRW	61.8	70.9	0.36	87.4	11.8	61.3	1H
821457		N8203510	HRW	62.0	72.3	0.36	88.9	12.2	60.4	1H
821458		N8203511	HRW	61.8	71.5	0.36	88.0	10.7	60.4	1H
821459		N8203512	HRW	61.8	70.5	0.37	86.7	11.8	60.3	1H
821460		N8203601	HRW	62.0	72.9	0.33	91.1	12.1	60.9	1H
821461		N8203602	HRW	62.2	72.0	0.31	91.4	8.5	58.6	4M
821462		N8203701	HRW	62.8	72.4	0.36	89.0	11.8	61.3	3M
821463		N8203702	HRW	62.4	71.2	0.37	87.3	11.9	61.2	3M
821464		N8203703	HRW	62.0	69.9	0.36	86.7	9.7	61.4	2H
821465		N8203704	HRW	62.4	72.1	0.36	89.0	11.3	61.3	4M
821466		N8205202	SWW	62.6	71.1	0.41	85.8	11.4	58.2	2M
821467		N8203106	SWW	62.0	71.8	0.38	88.3	10.7	58.2	2M
821468		N8201613	SWW	63.0	76.4	0.38	93.9	9.4	60.3	6M
821469		N8203404	SWW	63.2	72.4	0.41	86.9	9.7	59.6	2M
821470		N8201705	SWW	61.8	70.8	0.41	85.4	10.2	58.6	2M
821471	HATTON	C1017772	HRW	63.8	73.3	0.35	90.6	11.3	62.6	2H
821472	NUGAINES MORO	C1013968	SWW	62.4	70.9	0.36	88.3	10.6	59.1	2M
821473		C1013740	CLUB	60.0	73.0	0.41	88.1	10.3	57.6	2M
821474		N8200103	HRW	62.2	74.4	0.36	91.1	11.1	61.0	2H
821475		5/ N8200302	HRW	62.2	74.9	0.36	91.9	12.0	61.7	3H
821476		6/ N8202705	HRW	62.2	72.9	0.36	89.4	13.0	63.3	3H
821477		N8203801	HRW	62.4	71.6	0.41	85.8	13.6	62.9	2H
821478		N8203901	HRW	62.0	72.3	0.41	86.7	12.7	62.4	2H
821479		N8203103	HRW	62.2	71.5	0.39	86.6	11.4	63.3	5H
821480		N8200503	HRW	62.6	72.6	0.35	90.0	11.6	62.7	3H
821481		N8200605	HRW	63.4	75.5	0.35	93.1	10.3	63.1	4H
821482		N8200603	HRW	62.2	74.4	0.33	92.6	12.5	63.5	2H
821483		N8200604	HRW	61.6	71.2	0.36	88.0	11.0	62.2	4H
821484		6/ N8200811	HRW	63.4	74.0	0.35	91.6	10.4	63.4	5H
821485		N8200806	HRW	63.4	73.4	0.37	89.8	10.7	63.4	4H





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LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR	RMKS
					3/			4/		
821451	HATTON	N8203505	HRW	58.8	58.8	1.0	785	785	8	P-MIXO,BCRGR
821452		N8203506	HRW	60.3	59.4	2.9	950	894	2	
821453		N8203507	HRW	58.5	57.2	1.0	830	749	8	P-MIXO,BCRGR
821454		C1017772	HRW	62.5	62.1	2.5	935	910	2	
821455		N8203508	HRW	61.2	61.9	3.3	900	943	2	
821456		N8203509	HRW						8	P-MIXO,BCRGR
821457		N8203510	HRW	59.1	57.9	1.0	855	781	8	P-MIXO,BCRGR
821458		N8203511	HRW	57.3	57.6	1.0	760	779	9	P-MIXO,BCRGR
821459		N8203512	HRW	59.3	58.5	1.0	765	715	8	P-MIXO,BCRGR
821460		N8203601	HRW	60.2	59.1	1.3	935	867	5	P-MIXO,BCRGR
821461		N8203602	HRW	56.3	58.8	2.4	785	940	6	P-MIXO,BCRGR
821462		N8203701	HRW	57.8	57.0	1.8	933	883	4	P-MIXO,BCRGR
821463		N8203702	HRW	60.3	59.4	1.8	955	899	4	P-MIXO,BCRGR
821464		N8203703	HRW						4	P-MIXO,BCRGR
821465		N8203704	HRW	59.8	59.5	1.5	920	901	4	P-MIXO,BCRGR
821466		N8205202	SWW	54.8	54.4	1.0	885	861	8	P-MIXO,BCRGR
821467		N8203106	SWW	54.1	54.4	1.0	870	888	6	P-MIXO,BCRGR
821468		N8201613	SWW	59.9	61.5	4.0	850	946	4	P-MIXO,BCRGR
821469		N8203404	SWW	55.5	56.8	1.4	825	903	8	P-MIXO,BCRGR
821470		N8201705	SWW	55.0	55.8	1.0	900	948	8	P-MIXO,BCRGR
821471	HATTON	C1017772	HRW	61.1	60.8	2.2	933	914	2	
821472		C1013968	SWW	54.9	55.3	1.0	775	800	8	
821473		C1013740	CLUB	52.1	52.8	1.0	855	897	6	
821474		N8200103	HRW	60.3	60.2	2.1	930	924	4	P-BCRGR
821475		N8200302	HRW	62.9	61.9	2.9	1030	968	2	
821476		N8202705	HRW	66.0	64.0	2.8	1000	876	2	P-MIXO,BCRGR
821477		N8203801	HRW	64.7	62.1	2.0	1038	877	3	P-MIXO,BCRGR
821478		N8203901	HRW	62.3	60.6	1.5	955	850	4	P-MIXO,BCRGR
821479		N8203103	HRW	64.9	64.5	4.8	915	890	2	P-LVOL
821480		N8200503	HRW	63.5	62.9	2.6	990	953	4	P-BCRGR
821481		N8200605	HRW	62.6	63.3	3.7	915	958	6	P-BCRGR
821482		N8200603	HRW	63.2	61.7	1.5	980	887	3	P-MIXO,BCRGR
821483		N8200604	HRW	64.4	64.4	2.3	950	950	7	P-BCRGR
821484		N8200811	HRW	67.0	67.6	5.1	910	947	2	
821485		N8200806	HRW	65.3	65.6	4.2	948	967	4	P-BCRGR



LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	MTYPE
821486		6/ N8200812	HRW	62.8	70.7	0.40	85.5	10.5	63.5	4H
821487		6/ N8200807	HRW	63.4	72.1	0.35	89.5	11.7	64.5	5H
821488		6/ N8200808	HRW	64.2	74.6	0.35	91.9	11.4	63.1	4H
821489		6/ N8200809	HRW	63.2	72.5	0.35	90.0	12.0	63.1	4H
821490		N8200813	HRW	63.6	73.8	0.36	90.5	10.9	63.4	4H
821491		6/ N8200810	HRW	64.0	73.5	0.36	90.4	11.4	61.8	3H
821492		N8200924	HRW	63.6	74.1	0.33	92.7	10.3	60.4	2H
821493		N8200925	HRW	64.2	74.3	0.32	93.2	10.4	63.1	2H
821494		N8200926	HRW	64.0	75.0	0.33	93.7	10.2	60.2	2H
821495		N8200927	HRW	64.0	74.5	0.33	93.1	10.2	63.1	2H
821496		N8200928	HRW	63.8	74.6	0.32	93.4	10.6	63.7	2H
821497		N8200929	HRW	64.2	74.9	0.33	93.6	10.6	62.8	2H
821498		N8200930	HRW	64.2	74.9	0.33	93.5	10.4	63.4	3H
821499	HATTON	C1017772	HRW	65.0	73.9	0.37	90.1	11.9	62.9	3H
821500		N8200936	HRW	64.2	74.8	0.32	93.5	11.0	61.7	2H
821501		N8200937	HRW	63.8	74.4	0.32	93.4	10.6	62.9	2H
821502		N8200938	HRW	63.4	74.6	0.32	93.7	10.7	63.6	2H
821503		N8200939	HRW	63.6	75.5	0.33	93.7	11.9	62.8	2H
821504		N8200931	HRW	63.6	74.6	0.32	93.3	11.2	64.4	2H
821505		N8200940	HRW	63.6	73.0	0.33	91.5	11.8	64.4	2H
821506		6/ N8200941	HRW	63.2	74.7	0.33	93.2	11.2	64.0	2H
821507		6/ N8200942	HRW	63.6	74.7	0.34	92.6	12.0	61.5	2H
821508		N8200932	HRW	63.4	74.1	0.33	92.4	10.8	61.7	2H
821509		N8200933	HRW	63.6	75.0	0.34	93.0	10.8	64.2	2H
821510		6/ N8200934	HRW	63.6	74.7	0.34	92.6	10.2	62.3	2H
821511		6/ N8200943	HRW	63.8	75.1	0.37	91.6	10.7	62.6	2H
821512		N8200944	HRW	63.6	74.6	0.33	93.0	10.1	63.3	3H
821513		N8205701	HRW	62.6	75.1	0.37	91.6	10.8	59.0	3M
821514		N8204001	HRW	63.4	72.6	0.36	89.1	11.5	60.8	4M
821515		N8204002	HRW	63.4	71.5	0.37	87.7	12.5	63.9	3H
821516		N8204007	HRW	63.4	72.4	0.36	88.9	11.8	63.0	3H
821517		N8204003	HRW	63.0	71.7	0.36	88.2	11.7	63.6	5H
821518		N8204004	HRW	63.0	71.2	0.36	88.2	12.8	61.5	3H
821519		N8204005	HRW	62.6	71.1	0.36	87.6	13.1	62.2	4M
821520		N8204006	HRW	62.6	71.1	0.37	87.2	11.2	58.6	3M



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LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR	RMKS
					<u>3/</u>			<u>4/</u>		
821486		N8200812	HRW	65.2	65.7	3.6	995	1026	3	
821487		N8200807	HRW	67.4	66.7	4.8	985	942	2	
821488		N8200808	HRW	64.7	64.3	2.9	980	955	2	
821489		N8200809	HRW	66.3	65.3	3.2	990	928	2	
821490		N8200813	HRW	66.5	66.6	3.4	985	991	4	P-BCRGR
821491		N8200810	HRW	64.4	64.0	2.9	985	960	2	
821492		N8200924	HRW	61.9	62.6	2.5	905	948	5	P-MIXO,BCRGR
821493		N8200925	HRW	62.8	63.4	2.3	920	957	4	P-MIXO,BCRGR
821494		N8200926	HRW	61.6	62.4	2.5	925	975	6	P-MIXO,BCRGR
821495		N8200927	HRW	62.5	63.3	1.8	940	990	4	P-MIXO,BCRGR
821496		N8200928	HRW	63.5	63.9	2.0	930	955	5	P-MIXO,BCRGR
821497		N8200929	HRW	63.6	64.0	2.0	920	945	4	P-MIXO,BCRGR
821498		N8200930	HRW	63.0	63.6	1.8	920	957	4	P-MIXO,BCRGR
821499	HATTON	C1017772	HRW	64.0	63.1	2.9	973	917	3	
821500		N8200936	HRW	62.9	62.9	2.2	940	940	4	P-MIXO,BCRGR
821501		N8200937	HRW	62.7	63.1	2.0	935	960	4	P-MIXO,BCRGR
821502		N8200938	HRW	63.5	63.8	2.2	920	939	6	P-MIXO,BCRGR
821503		N8200939	HRW	63.9	63.0	1.9	950	894	3	P-MIXO,BCRGR
821504		N8200931	HRW	64.8	64.6	1.9	950	938	3	P-MIXO,BCRGR
821505		N8200940	HRW	65.4	64.6	2.2	940	890	4	P-MIXO,BCRGR
821506		N8200941	HRW	64.4	64.2	2.0	960	948	4	P-MIXO,BCRGR
821507		N8200942	HRW	62.7	61.7	1.9	965	903	2	
821508		N8200932	HRW	62.7	62.9	2.0	960	972	2	
821509		N8200933	HRW	63.7	63.9	2.0	950	962	4	P-MIXO,BCRGR
821510		N8200934	HRW	62.7	63.5	2.1	935	985	2	
821511		N8200943	HRW	63.5	63.8	2.3	935	954	2	
821512		N8200944	HRW	62.6	63.5	2.1	920	976	4	P-MIXO,BCRGR
821513		N8205701	HRW	60.0	60.2	2.5	825	837	8	P-LVOL,BCRGR
821514		N8204001	HRW	62.5	62.0	2.9	825	794	6	P-LVOL,BCRGR
821515		N8204002	HRW	66.6	65.1	2.7	940	847	3	P-LVOL,BCRGR
821516		N8204007	HRW	65.0	64.2	2.4	910	860	3	Q-BCRGR
821517		N8204003	HRW	66.5	65.8	4.4	920	877	2	Q-LVOL
821518		N8204004	HRW	63.0	61.2	2.1	985	873	4	P-LVOL,BCRGR
821519		N8204005	HRW	65.5	63.4	2.4	875	745	4	P-LVOL,BCRGR
821520		N8204006	HRW	60.0	59.8	2.5	800	788	8	P-LVOL,BCRGR





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LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	MTYPE
821521		6/ N8201002	HRW	63.4	71.1	0.38	86.8	12.6	61.8	2H
821522		N8201204	HRW	63.4	72.9	0.35	90.4	11.4	61.3	6M
821523		6/ N8201116	HRW	62.8	72.3	0.38	88.2	11.6	64.2	5H
821524		6/ N8201115	HRW	62.8	73.4	0.36	90.4	10.8	61.0	4H
821525		N8201117	HRW	63.8	73.6	0.33	92.1	10.8	63.5	5H
821526		6/ N8201118	HRW	63.4	72.7	0.34	90.8	11.5	65.8	5H
821527		6/ N8201119	HRW	64.6	75.2	0.35	92.6	11.8	64.5	5H
821528		5/ N8201120	HRW	63.8	75.2	0.36	91.9	12.1	63.4	3H
821529		6/ N8201121	HRW	63.0	73.9	0.37	90.3	12.2	62.3	3H
821530		N8201122	HRW	64.0	75.0	0.36	91.7	11.2	65.7	5H
821531		N8201123	HRW	63.4	74.8	0.35	92.3	11.5	64.5	3H
821532		N8201124	HRW	63.2	75.5	0.35	92.9	11.6	62.4	4H
821533		N8204101	HRW	62.6	74.4	0.39	89.7	10.8	58.2	2M
821534		N8202505	HRW	63.0	74.5	0.38	90.6	12.0	64.5	2H
821535		N8205801	HRW	63.4	73.5	0.37	89.7	11.1	63.3	2H
821536		N8201305	HRW	63.2	73.6	0.38	89.6	12.5	63.4	2H
821537		N8201304	HRW	62.8	73.1	0.39	88.6	12.2	61.6	2H
821538		N8201306	HRW	62.8	73.1	0.37	89.6	11.9	63.0	2H
821539		N8205602	HRW	63.2	75.0	0.35	92.3	11.6	61.6	1H
821540	HATTON	C1017772	HRW	64.8	74.1	0.37	90.7	11.9	63.0	3H
821541		6/ N8201402	HRW	63.6	72.5	0.34	90.3	12.1	63.8	3H
821542		N8201403	HRW	62.4	72.0	0.34	89.8	11.9	63.6	2H
821543		N8201404	HRW	64.0	72.5	0.34	90.3	12.4	64.0	2H
821544		N8201405	HRW	63.4	71.4	0.33	89.7	12.5	62.8	2H
821545		N8204201	HRW	63.0	71.3	0.34	89.1	12.0	61.5	2H
821546		6/ N8201508	HRW	64.2	73.8	0.35	90.9	11.7	61.9	4H
821547		6/ N8201509	HRW	64.8	74.7	0.36	91.7	12.4	63.8	4H
821548		N8201510	HRW	63.2	74.3	0.37	90.8	11.4	62.5	2H
821549		N8201511	HRW	63.2	73.6	0.37	90.0	11.7	62.3	3M
821550		N8201512	HRW	64.8	74.5	0.37	90.9	12.4	62.2	2H
821551		N8201513	HRW	63.0	75.2	0.35	92.5	12.9	63.3	4H
821552		6/ N8201514	HRW	64.0	73.3	0.36	90.3	11.8	64.4	5H
821553		N8201515	HRW	63.2	74.9	0.35	92.1	11.6	59.4	2M
821554		N8201516	HRW	63.6	73.4	0.36	90.3	11.2	62.5	3H
821555		6/ N8201517	HRW	65.2	75.0	0.36	91.7	12.0	63.4	4H



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LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR	RMKS
					<u>3/</u>			<u>4/</u>		
821521		N8201002	HRW	63.6	62.0	2.0	925	826	2	P-LVOL, BCRGR
821522		N8201204	HRW	62.4	62.0	3.3	895	870	5	
821523		N8201116	HRW	66.0	65.4	4.7	940	903	2	
821524		N8201115	HRW	62.5	62.7	2.9	900	912	2	
821525		N8201117	HRW	66.0	66.2	4.6	920	932	4	P-BCRGR
821526		N8201118	HRW	69.0	68.5	5.0	950	919	2	
821527		N8201119	HRW	66.5	65.7	4.4	940	890	2	
821528		N8201120	HRW	65.7	64.6	3.2	950	882	1	
821529		N8201121	HRW	64.2	63.0	4.0	945	871	2	
821530		N8201122	HRW	68.1	67.9	4.9	905	893	4	P-BCRGR
821531		N8201123	HRW	66.7	66.2	3.5	985	954	4	P-BCRGR
821532		N8201124	HRW	64.2	63.6	3.8	910	873	2	P-LVOL, BCRGR
821533		N8204101	HRW	57.2	57.4	1.1	780	792	9	
821534		N8202505	HRW	63.2	62.2	1.7	980	918	4	P-BCRGR
821535		N8205801	HRW	63.6	63.5	2.3	935	929	5	P-BCRGR
821536		N8201305	HRW	64.6	63.1	1.9	1010	917	5	P-MIXO, BCRGR
821537		N8201304	HRW	62.0	60.8	1.1	900	826	5	P-MIXO, BCRGR
821538		N8201306	HRW	62.1	61.2	1.7	963	907	3	P-MIXO, BCRGR
821539		N8205602	HRW	60.4	59.8	1.0	960	923	4	P-MIXO, BCRGR
821540	HATTON	C101772	HRW	64.1	63.2	2.5	1000	944	2	
821541		N8201402	HRW	63.6	62.5	2.3	1000	932	1	
821542		N8201403	HRW	63.7	62.8	2.1	985	929	5	P-BCRGR
821543		N8201404	HRW	64.6	63.2	2.3	1005	918	2	Q-MTIME
821544		N8201405	HRW	63.5	62.0	1.3	1015	922	2	Q-MTIME
821545		N8204201	HRW	62.7	61.7	2.0	1050	988	4	P-BCRGR
821546		N8201508	HRW	62.8	62.1	3.1	940	897	2	
821547		N8201509	HRW	65.4	64.0	3.6	963	876	2	
821548		N8201510	HRW	63.1	62.7	2.3	925	900	3	Q-BCRGR
821549		N8201511	HRW	62.2	61.5	2.0	875	832	3	Q-BCRGR
821550		N8201512	HRW	62.8	61.4	1.7	975	888	2	P-MIXO
821551		N8201513	HRW	63.4	61.5	3.0	943	825	4	P-BCRGR
821552		N8201514	HRW	65.4	64.6	4.8	975	925	2	
821553		N8201515	HRW	59.2	58.6	1.2	845	808	8	P-BCRGR
821554		N8201516	HRW	62.4	62.2	3.1	900	888	6	P-BCRGR
821555		N8201517	HRW	65.6	64.6	4.2	955	893	2	



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LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	MTYPE
821556		6/ N8201518	HRW	65.2	74.4	0.37	90.6	12.0	61.9	2H
821557		6/ N8201605	HRW	62.6	72.8	0.38	88.6	13.0	62.2	3H
821558		6/ N8201606	HRW	63.2	72.5	0.35	89.8	12.8	62.0	3H
821559		6/ N8201607	HRW	64.0	71.7	0.36	88.7	11.7	61.2	2H
821560		6/ N8204301	HRW	64.0	74.4	0.36	91.4	11.3	62.6	2H
821561		6/ N8204302	HRW	64.0	74.5	0.37	90.9	12.0	62.2	3H
821562		6/ N8204303	HRW	63.8	74.7	0.38	90.6	12.1	61.5	3H
821563		N8201702	HRW	62.8	70.8	0.39	86.0	12.3	63.3	2H
821564		N8201703	HRW	62.8	73.0	0.37	89.3	13.7	60.6	3M
821565		N8201704	HRW	63.4	71.5	0.39	86.9	12.5	61.6	2H
821566		N8201909	HRW	64.0	72.5	0.37	88.6	11.8	64.7	5H
821567		6/ N8201910	HRW	64.0	72.0	0.36	88.7	12.4	62.1	2H
821568	HATTON	C1017772	HRW	65.2	72.7	0.36	89.3	12.1	63.3	2H
821569		6/ N8202004	HRW	63.8	73.6	0.34	91.4	11.9	61.4	3M
821570		N8202005	HRW	63.2	73.8	0.32	92.6	10.0	57.4	2M
821571		6/ N8202102	HRW	62.6	75.1	0.34	93.1	11.7	61.3	3H
821572		N8204401	HRW	63.8	72.0	0.35	89.1	12.0	62.4	2H
821573		N8204501	HRW	64.0	74.3	0.32	93.2	10.5	61.2	3H
821574		6/ N8202204	HRW	63.2	72.7	0.35	90.0	11.6	61.8	3H
821575		N8202205	HRW	62.6	74.0	0.34	92.0	11.7	60.3	3H
821576		6/ N8204601	HRW	63.6	73.8	0.33	92.0	11.2	62.0	3H
821577		6/ N8204602	HRW	62.8	73.5	0.36	90.5	11.5	61.0	3H
821578		6/ N8204603	HRW	63.8	74.1	0.33	92.3	11.1	60.4	3H
821579		N8204604	HRW	63.6	67.4	0.33	85.4	11.4	62.9	5H
821580		6/ N8204605	HRW	63.0	73.4	0.34	91.5	10.7	63.2	5H
821581		N8202304	HRW	63.2	72.8	0.36	89.8	11.9	61.6	3H
821582		N8202305	HRW	62.8	73.7	0.34	91.6	12.9	62.3	2H
821583		6/ N8202306	HRW	63.2	73.5	0.38	89.1	11.7	61.1	3H
821584		N8202307	HRW	64.2	73.1	0.37	89.5	11.3	61.4	4H
821585		N8202308	HRW	63.4	72.9	0.35	90.2	11.1	61.6	3H
821586		N8204701	HRW	63.4	74.3	0.38	90.2	10.5	59.1	4M
821587		N8204702	HRW	63.0	73.5	0.42	87.2	10.7	60.1	4M
821588	HATTON	C1017772	HRW	64.6	73.9	0.38	89.6	12.0	61.9	3H
821589		N8204703	HRW	62.8	72.3	0.39	87.5	11.9	60.1	2H
821590		N8204704	HRW	63.2	74.2	0.39	89.3	10.9	58.9	3M



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LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR	RMKS
					<u>3/</u>			<u>4/</u>		
821556		N8201518	HRW	63.1	62.1	2.3	965	903	2	
821557		N8201605	HRW	64.4	62.4	3.2	998	874	2	
821558		N8201606	HRW	64.5	62.7	3.1	955	843	2	P-MIXO,BCRGR
821559		N8201607	HRW	61.6	60.9	1.9	905	862	4	Q-MIXO
821560		N8204301	HRW	62.1	61.8	2.0	970	951	2	
821561		N8204302	HRW	63.9	62.9	3.9	978	916	2	
821562		N8204303	HRW	62.3	61.2	3.1	968	900	2	
821563		N8201702	HRW	62.5	59.8	1.8	940	773	4	P-MIXO,BCRGR
821564		N8201703	HRW	62.3	60.8	1.5	910	817	6	P-MIXO,BCRGR
821565		N8201704	HRW							
821566		N8201909	HRW	65.7	64.9	5.5	1010	960	4	P-MIXO,BCRGR
821567		N8201910	HRW	63.7	62.3	2.1	980	893	1	
821568	HATTON	C1017772	HRW	64.6	63.5	2.7	975	907	2	
821569		N8202004	HRW	62.0	61.1	2.4	970	914	3	Q-BCRGR
821570		N8202005	HRW	55.6	56.6	1.1	825	887	6	P-MIXO,BCRGR
821571		N8202102	HRW	63.2	62.5	2.9	980	937	2	
821572		N8204401	HRW	62.6	61.6	1.8	925	863	4	P-BCRGR
821573		N8204501	HRW	61.4	61.9	2.5	935	966	4	P-BCRGR
821574		N8202204	HRW	63.6	63.0	3.2	990	953	2	
821575		N8202205	HRW	61.2	60.5	2.8	975	932	4	P-BCRGR
821576		N8204601	HRW	63.4	63.2	3.7	965	953	2	
821577		N8204602	HRW	62.7	62.2	3.3	970	939	2	
821578		N8204603	HRW	61.7	61.6	3.3	940	934	2	
821579		N8204604	HRW	64.5	64.1	4.3	1000	975	2	P-FYELD
821580		N8204605	HRW	64.1	64.4	4.2	925	944	2	
821581		N8202304	HRW	62.2	61.3	3.0	920	864	2	P-LVOL
821582		N8202305	HRW	65.4	63.5	3.1	980	862	2	P-LVOL
821583		N8202306	HRW	63.0	62.3	2.9	950	907	2	
821584		N8202307	HRW	63.9	63.6	3.7	905	886	2	P-LVOL
821585		N8202308	HRW	63.9	63.8	2.5	875	869	5	P-BCRGR
821586		N8204701	HRW	60.8	61.3	2.8	880	911	4	P-BCRGR
821587		N8204702	HRW	62.0	62.3	3.4	870	889	4	P-BCRGR
821588	HATTON	C1017772	HRW	65.1	64.1	3.1	960	898	2	
821589		N8204703	HRW	62.2	61.3	2.6	1040	984	2	
821590		N8204704	HRW	60.0	60.1	2.3	890	896	6	P-LVOL,BCRGR





LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	MTYPE
821591		<u>5</u> /N8204705	HRW	62.4	76.1	0.46	88.0	11.2	57.7	3H
821592		N8202404	HRW	63.6	75.0	0.36	91.8	10.9	58.9	2H
821593		N8202405	HRW	63.6	71.9	0.38	87.9	10.9	60.0	3H
821594		N8202406	HRW	62.6	72.9	0.37	89.2	10.6	58.6	3M
821595		N8202503	HRW	63.6	72.7	0.39	88.1	11.6	60.7	3H
821596		N8204801	HRW	63.2	71.4	0.34	89.0	12.4	62.2	2H
821597		N8202608	HRW	62.0	71.8	0.37	88.1	10.9	60.4	2H
821598		N8202603	HRW	63.2	74.3	0.36	91.4	11.3	59.7	3H
821599		<u>5</u> /N8204901	HRW	61.8	73.1	0.33	91.4	11.7	65.3	5H
821600		<u>5</u> /N8204902	HRW	62.4	73.7	0.37	89.9	13.6	61.1	3H
821601		N8204903	HRW	64.4	74.2	0.32	93.0	11.0	62.3	2H
821602		N8202904	HRW	62.8	74.0	0.38	89.6	12.8	61.5	2H
821603		N8203005	HRW	63.4	72.4	0.35	89.7	12.0	61.8	2H
821604		N8203006	HRW	62.8	73.8	0.35	90.9	11.7	61.4	3H
821605		N8203007	HRW	63.4	73.0	0.37	89.1	11.1	60.5	2H
821606		<u>6</u> /N8203104	HRW	63.6	71.6	0.35	88.8	12.9	61.8	3H
821607		<u>6</u> /N8203105	HRW	62.0	72.9	0.36	89.6	11.5	60.7	5H
821608		N8201608	HRW	63.0	72.5	0.36	89.1	13.0	60.2	2H
821609		<u>7</u> /N8201609	HRW	62.8	73.2	0.36	90.2	12.0	60.8	3H
821610		N8201610	HRW	62.8	72.7	0.37	89.0	13.2	59.3	2H
821611		N8203302	HRW	62.4	72.3	0.39	87.7	12.6	59.6	2H
821612		N8203303	HRW	62.4	72.0	0.37	88.2	11.8	60.2	2H
821613		<u>6</u> /N8203304	HRW	62.8	72.6	0.39	87.9	12.2	59.9	2H
821614		<u>6</u> /N8203305	HRW	63.2	70.5	0.35	87.6	11.2	59.0	3H
821615		N8203306	HRW	62.2	74.5	0.38	90.3	12.3	59.2	1H
821616		<u>6</u> /N8203307	HRW	63.4	72.5	0.38	88.5	12.3	61.1	2H
821617	HATTON	<u>6</u> /1017772	HRW	64.4	72.8	0.39	88.2	12.1	61.6	3H
821618		N8203403	HRW	63.6	73.5	0.39	89.0	11.7	60.9	3H
821619		N8203513	HRW	61.6	71.0	0.41	85.3	12.5	59.0	1H
821620		N8203514	HRW	62.4	71.2	0.39	86.3	12.1	57.7	1H
821621		<u>5</u> /N8203515	HRW	64.0	73.3	0.34	91.2	10.7	63.1	4H
821622		N8203603	HRW	64.2	73.7	0.31	93.1	11.2	60.2	2H
821623		N8203604	HRW	63.4	73.4	0.37	89.6	12.1	60.6	1H
821624		<u>6</u> /N8205001	HRW	63.2	73.7	0.38	89.7	11.4	60.8	7M
821625		<u>6</u> /N8205002	HRW	62.8	73.1	0.37	89.4	11.2	60.2	5H



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LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR	RMKS
					<u>3/</u>			<u>4/</u>		
821591		N8204705	HRW	59.6	59.4	2.6	865	853	6P-LVOL,BCRGR	
821592		N8202404	HRW	61.3	61.4	2.9	915	921	2	
821593		N8202405	HRW	63.4	63.5	3.8	875	881	5P-LVOL,BCRGR	
821594		N8202406	HRW	58.4	58.8	2.0	840	865	6P-LVOL,BCRGR	
821595		N8202503	HRW	63.0	62.4	3.4	1005	968	4P-BCRGR	
821596		N8204801	HRW	65.3	63.9	1.9	1020	933	5P-MIXO,BCRGR	
821597		N8202608	HRW	60.5	60.6	1.8	880	886	6P-LVOL,BCRGR	
821598		N8202603	HRW	60.7	60.4	3.0	890	871	6P-LVOL,BCRGR	
821599		N8204901	HRW	69.2	68.5	6.3	1035	992	1	
821600		N8204902	HRW	65.9	63.3	3.4	1030	869	1	
821601		N8204903	HRW	62.5	62.5	2.1	925	925	6P-BCRGR	
821602		N8202904	HRW	63.5	61.7	2.3	965	853	6P-BCRGR	
821603		N8203005	HRW	64.5	63.5	1.8	970	908	4P-MIXO,BCRGR	
821604		N8203006	HRW	63.8	63.1	4.1	980	937	5P-BCRGR	
821605		N8203007	HRW	62.8	62.7	2.8	910	904	4P-BCRGR	
821606		N8203104	HRW	64.4	62.5	3.4	1015	897	2	
821607		N8203105	HRW	63.9	63.4	4.7	940	909	3Q-BCRGR	
821608		N8201608	HRW	61.4	59.4	1.9	985	861	2P-MIXO	
821609		N8201609	HRW	64.0	63.0	3.6	925	863	2	
821610		N8201610	HRW	60.7	58.5	1.8	955	819	5P-MIXO,BCRGR	
821611		N8203302	HRW	59.4	57.8	1.0	875	776	8P-MIXO,BCRGR	
821612		N8203303	HRW	60.2	59.4	1.7	900	850	5P-MIXO,BCRGR	
821613		N8203304	HRW	62.3	61.1	2.3	983	909	2	
821614		N8203305	HRW	62.4	62.2	3.6	1025	1013	2	
821615		N8203306	HRW	59.0	57.7	1.0	845	764	9P-MIXO,LVOL,BCRGR	
821616		N8203307	HRW	62.6	61.3	1.9	1000	919	2Q-MIXO	
821617	HATTON	C1017772	HRW	63.9	62.8	2.8	970	902	2	
821618		N8203403	HRW	62.3	61.6	2.6	915	872	2	
821619		N8203513	HRW	58.5	57.0	1.0	860	767	8P-LVOL,BCRGR	
821620		N8203514	HRW	57.5	56.4	1.0	810	742	8P-LVOL,BCRGR	
821621		N8203515	HRW	64.0	64.3	3.5	965	984	2	
821622		N8203603	HRW	61.6	61.4	2.1	935	923	8P-BCRGR	
821623		N8203604	HRW	60.9	59.8	1.1	975	907	2P-MIXO	
821624		N8205001	HRW	63.4	63.0	4.4	973	948	2	
821625		N8205002	HRW	63.6	63.4	5.0	988	976	2	



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LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	MTYPE
821626	HATTON	N8203708	HRW	63.0	71.8	0.37	88.3	11.5	60.5	2H
821627		N8203705	HRW	62.8	70.0	0.40	84.6	12.2	61.7	2H
821628		N8203706	HRW	63.4	72.2	0.36	88.8	11.8	61.9	4H
821629		N8203707	HRW	62.8	71.0	0.37	87.2	11.5	59.8	2H
821630		N8205102	HRW	62.4	68.1	0.37	84.2	11.6	61.1	2H
821631	HATTON	N8205101	HRW	63.2	70.2	0.37	86.5	12.2	62.1	2H
821632		N8205103	HRW	62.2	64.0	0.37	80.1	11.7	60.0	3H
821633		N8205201	SWW	63.4	71.6	0.39	87.4	11.5	58.9	1H
821634		N8201611	SWW	63.6	70.7	0.40	85.6	11.1	59.5	3H
821635		N8201612	SWW	60.0	68.8	0.41	82.3	10.7	59.4	6M
821636	HATTON	N8205301	SWW	63.6	76.0	0.44	89.5	12.4	59.3	2H
821637		N8204502	SRW	62.4	74.9	0.40	90.7	11.1	55.7	1H
821638		N8205003	HRW	64.0	75.1	0.35	92.3	11.6	60.9	2H
821639		N8205004	HRW	64.2	73.7	0.37	89.9	11.2	61.1	2H
821640		N8205401	SWW	63.6	70.1	0.40	85.2	11.7	57.9	1H
821641	HATTON	N8202309	HRW	64.2	75.5	0.41	89.0	11.4	58.9	4M
821642		N8205501	HRW	64.0	70.7	0.39	84.8	11.4	56.4	1H
821643		N8204102	HRW	62.4	70.9	0.43	83.4	12.5	57.9	1H
821644		N8204103	HRW	62.2	73.7	0.44	85.5	11.4	57.7	3M
821645		C1017772	HRW	64.8	73.3	0.39	88.3	12.1	62.1	4H
821646	HATTON	C1013968	SWW	62.8	69.4	0.44	81.6	11.4	58.8	2H
821647		C1013740	CLUB	59.6	72.7	0.46	84.1	11.3	56.7	2M
821648		N8204503	SRW	62.0	72.7	0.40	88.4	11.0	56.4	2M
821649		N8201003	SWW	64.2	67.6	0.40	81.5	10.9	56.3	3M
821650		N8201004	SWW	63.2	67.0	0.42	79.5	11.2	57.0	4M
821651	HATTON	N8201005	SWW	64.2	68.2	0.41	82.0	10.4	57.1	4M
821652		N8201006	SWW	63.8	68.1	0.40	82.1	11.0	57.2	4M
821653		N8202504	SWW	63.6	76.3	0.42	91.7	11.6	60.3	3H
821654		N8202604	SWW	63.2	76.0	0.41	91.5	9.5	55.9	1H
821655		N8202605	SWW	63.0	70.1	0.40	85.0	9.9	55.9	3M
821656	HATTON	N8205601	SWW	63.2	75.6	0.40	92.1	10.5	58.8	2H
821657		C1017772	HRW	64.0	72.2	0.39	87.3	12.4	61.7	4H
821658		C1013968	SWW	62.0	69.3	0.44	81.6	10.7	56.6	3M





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LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR	RMKS
					<u>3/</u>			<u>4/</u>		
821626		N8203708	HRW	60.7	60.2	2.3	945	914	4	P-BCRGR
821627		N8203705	HRW							P-MIXO
821628		N8203706	HRW	63.9	63.1	2.9	925	875	2	
821629		N8203707	HRW	59.5	59.0	1.6	970	939	2	P-MTIME
821630		N8205102	HRW							P-MIXO
821631		N8205101	HRW							P-MIXO
821632		N8205103	HRW							P-MIXO
821633		N8205201	SWW							P-MIXO,BCRGR
821634		N8201611	SWW	56.9	56.4	1.0	1010	980	8	P-MIXO
821635		N8201612	SWW							P-MIXO
821636		N8205301	SWW	60.9	59.5	2.8	890	806	6	P-LVOL,BCRGR
821637		N8204502	SRW	53.0	52.9	1.0	835	829	9	P-LVOL,BCRGR
821638		N8205003	HRW	58.7	58.1	2.0	935	898	4	P-MIXO,BCRGR
821639		N8205004	HRW	61.5	61.3	2.2	925	913	4	P-MIXO,BCRGR
821640		N8205401	SWW							
821641		N8202309	HRW	59.5	59.1	2.2	860	835	5	P-LVOL,BCRGR
821642		N8205501	HRW							P-MIXO
821643		N8204102	HRW	59.3	58.9	2.5	935	910	5	P-MIXO
821644		N8204103	HRW	64.4	63.3	3.2	955	887	2	P-BCRGR
821645	HATTON	C1017772	HRW							
821646	NUGAINES	C1013968	SWW	56.4	56.0	1.4	980	955	5	
821647	MORO	C1013740	CLUB	54.2	53.9	1.2	900	882	9	
821648		N8204503	SRW	53.6	53.6	11.2	815	815	9	P-LVOL,BCRGR
821649		N8201003	SWW							P-MIXO
821650		N8201004	SWW							P-MIXO
821651		N8201005	SWW							P-MIXO
821652		N8201006	SWW							P-MIXO
821653		N8202504	SWW	62.1	61.5	3.3	970	934	2	
821654		N8202604	SWW	53.6	55.1	1.6	675	765	9	VP-LVOL,BCRGR
821655		N8202605	SWW							P-MIXO
821656		N8205601	SWW	58.7	59.2	2.2	890	920	2	
821657	HATTON	C1017772	HRW	64.3	62.9	2.9	1005	918	2	
821658	NUGAINES	C1013968	SWW	53.5	53.8	1.9	915	934	6	







NURSCO 53

LIND, H. HAV, WTRVL WA

E. DONALDSON

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE
						<u>1/</u>		<u>1/</u>	<u>3/</u>	
821659	HATTON --LIND DRY LATE--	C1017772	HRW	63.4	71.5	0.40	85.6	12.8	62.2	4H
821660	WANSER	C1013844	HRW	61.7	71.1	0.39	85.9	12.2	63.0	4H
821661	ID5012/WA5866	6/WA006816	HRW	61.6	72.1	0.38	87.5	11.9	61.7	2H
821662	HATTON --LIND IRRIGATED LATE--	C1017772	HRW	64.8	72.9	0.39	87.5	11.9	64.4	3H
821663	WANSER	C1013844	HRW	62.2	71.0	0.39	85.3	11.9	64.6	3H
821664	ID5012/WA5866	WA006816	HRW	62.1	72.0	0.37	88.1	11.5	63.5	2H
821665	K73061/N7200021	6/WA007048	HRW	63.0	72.0	0.37	88.3	11.9	63.2	4H
821666	CERCO/N7107028	6/WA007049	HRW	62.1	70.3	0.38	84.7	11.4	64.1	4H
821667	B77-99	6/WA006820	HRW	62.0	70.6	0.38	85.2	12.4	62.8	4H
821668	HATTON --HORSE HEAVEN--	C1017772	HRW	62.5	69.0	0.41	81.4	9.4	60.1	7M
821669	WANSER	C1013844	HRW	60.8	70.5	0.41	83.2	9.1	60.0	6L
821670	ID5012/WA5866	6/WA006816	HRW	57.3	68.3	0.40	80.8	9.2	57.9	4L
821671	K73061/N7200021	N7902301	HRW	60.3	69.3	0.39	82.4	9.0	60.3	7M
821672	CERCO/N7107028	N8000602	HRW	57.9	68.4	0.42	80.1	8.9	58.4	8L
821673	HATTON --WATERVILLE--	C1017772	HRW	65.4	70.1	0.35	85.8	10.4	62.8	4H
821674	WANSER	C1013844	HRW	63.9	70.7	0.33	88.1	10.7	62.3	4H
821675	ID5012/WA5866	6/WA006816	HRW	63.3	70.6	0.35	86.2	9.5	60.2	3H
821676	K73061/N7200021	WA007048	HRW	64.0	70.2	0.33	86.8	9.7	62.3	7M
821677	CERCO/N7107028	6/WA007049	HRW	63.3	69.2	0.33	86.0	9.3	60.3	7M
821678	N7200192/CARDON	6/N7800205	HRW	63.8	69.3	0.36	83.8	10.3	60.7	5H
821679	N7200192/CARDON	N7800207	HRW	63.2	68.4	0.35	82.6	10.6	63.7	4H
821680	K7100255/K7101537	N7900201	HRW	62.6	68.9	0.36	83.4	9.9	61.7	7M
821681	K7100239/K7100859	6/N7900901	HRW	63.5	69.9	0.36	85.6	10.2	62.9	5H
821682	N7106043/TP-98U	6/N8000201	HWW	63.4	69.5	0.35	84.8	10.0	61.2	4H
821683	286011/N7106043	N8000302	HWW	64.4	69.6	0.35	85.3	9.2	62.0	7M

1/ Observed Values Corrected to 14% Moisture Basis.5/ Particularly Promising Overall Quality Characteristics.3/ Absorption at 14% Moisture Corrected to 11% Protein.6/ Promising Overall Quality Characteristics.4/ Observed Values Corrected to 11% Protein.



NURSCO 53

LIND, H. HAV, WTRVL WA

E. DONALDSON

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC 4/	MTIME	LVOL	LVOLC 4/	BCRGR	RMKS
821659	HATTON --LIND DRY LATE--	C1017772	HRW	64.2	62.4	3.3	1018	906	2	
821660	WANSER	C1013844	HRW	63.9	62.7	3.6	1033	950	2	
821661	ID5012/WA5866	WA006816	HRW	63.8	62.9	2.0	1050	994	2	
821662	HATTON --LIND IRRIGATED LATE--	C1017772	HRW	65.5	64.6	2.6	945	889	2	
821663	WANSER	C1013844	HRW	66.0	65.1	3.4	965	903	3	
821664	ID5012/WA5866	WA006816	HRW	64.2	63.7	1.4	965	934	4	P-MTIME, BCRGR
821665	K73061/N7200021	WA007048	HRW	65.3	64.4	2.9	955	899	3	
821666	CERCO/N7107028	WA007049	HRW	65.7	65.3	2.7	985	960	2	Q-FYELD
821667	B77-99	WA006820	HRW	65.4	64.0	3.7	975	888	2	Q-FYELD
821668	HATTON --HORSE HEAVEN--	C1017772	HRW	59.7	61.3	4.3	875	974	3	
821669	WANSER	C1013844	HRW	59.3	61.2	5.3	850	981	3	
821670	ID5012/WA5866	WA006816	HRW	57.3	59.1	2.9	915	1027	2	P-BCRGR
821671	K73061/N7200021	N7902301	HRW	59.5	61.5	4.1	880	1004	4	P-BCRGR
821672	CERCO/N7107028	N8000602	HRW	57.5	59.6	4.6	905	1035	4	P-BCRGR
821673	HATTON --WATERVILLE--	C1017772	HRW	63.4	64.0	3.5	895	932	2	
821674	WANSER	C1013844	HRW	64.2	64.5	3.8	930	951	2	
821675	ID5012/WA5866	WA006816	HRW	60.9	62.4	3.1	850	943	2	
821676	K73061/N7200021	WA007048	HRW	62.7	64.0	3.5	840	921	6	P-BCRGR
821677	CERCO/N7107028	WA007049	HRW	61.8	63.5	5.2	825	930	4	P-BCRGR
821678	N7200192/CARDON	N7800205	HRW	66.2	66.9	4.5	875	918	2	Q-MILLING
821679	N7200192/CARDON	N7800207	HRW	66.5	66.9	4.1	905	930	3	Q-MILLING
821680	K7100255/K7101537	N7900201	HRW	64.3	65.4	4.6	810	878	5	P-BCRGR
821681	K7100239/K7100859	N7900901	HRW	64.8	65.6	3.9	925	975	6	P-BCRGR
821682	N7106043/TP-98U	N8000201	HWW	64.4	65.4	3.6	910	972	3	
821683	286011/N7106043	N8000302	HWW	64.4	66.2	5.0	800	912	8	VP-BCRGR

COMMENTS: The group from Horse Heaven were not typical milling and very low in protein for a good evaluation.  
Selections N8000201 and 202 are hard whites, with 201 showing good promise.

VP = Very Poor; P = Poor; Q = Questionable





NURSCO 54

LIND, WA

E. DONALDSON

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	MTYPE
821684	N701716/WMT18//TP/WA5909	6/N8100701	HRW	63.1	71.8	0.40	87.1	11.5	61.3	2H
821685	KAVKAZ/WA5836	6/N8100801	HRW	63.1	71.5	0.39	85.5	11.4	61.0	4H
821686	VH067469/ID0044	6/N8101001	HRW	62.0	71.5	0.42	85.0	11.0	61.4	6M
821687	9342/GNS/K69//17271//A65	N8101101	HRW	62.7	71.5	0.40	85.7	11.1	59.9	4M
821688	PULLMAN 2567	N8101303	HRW	62.6	71.4	0.39	86.4	10.8	58.7	6M
821689	TP-98U/N7106043	5/N8101601	HRW	62.3	72.6	0.40	87.5	11.4	60.0	5H
821690	C06963117/CERCO	6/N8101901	HRW	64.3	71.7	0.39	87.3	11.5	59.5	2H
821691	CERCO/N7300101	N8102201	HRW	62.3	70.0	0.41	82.7	11.4	58.2	1H
821692	N6754/SM7437/CERCO//N722	N8103102	HRW	63.2	71.5	0.41	85.6	10.9	59.5	6M
821693	N6754/SM7437/CERCO//N722	6/N8103104	HRW	63.2	71.0	0.39	85.3	10.8	59.7	4M
821694	N6754/SM7437/CERCO/WA590	N8103201	HRW	63.1	69.2	0.43	80.8	10.9	58.5	4M
821695	BEZ/3/NRN 10/SNG//*CNN	N8103601	HRW	63.5	70.2	0.43	82.4	10.4	59.1	2H
821696	HATTON	C1017772	HRW	64.7	71.7	0.39	86.9	11.2	60.7	4H
821697	WESTON	C1017727	HRW	64.0	71.9	0.39	86.7	11.5	61.3	2H

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC 3/	MTIME	LVOL	LVOLC 4/	BCRGR	RMKS
821684	N701716/WMT18//TP/WA5909	N8100701	HRW	63.0	62.5	2.3	920	889	3	
821685	KAVKAZ/WA5836	N8100801	HRW	64.6	64.2	3.6	950	925	2	
821686	VH067469/ID0044	N8101001	HRW	63.1	63.1	3.4	960	960	2	Q-BCRGR
821687	9342/GNS/K69//17271//A65	N8101101	HRW	62.7	62.6	3.1	955	949	4	P-LVOL,BCRGR
821688	PULLMAN 2567	N8101303	HRW	60.7	60.9	3.3	885	897	4	
821689	TP-98U/N7106043	N8101601	HRW	63.6	63.2	4.9	990	965	1	
821690	C06963117/CERCO	N8101901	HRW	62.7	62.2	2.5	950	919	2	P-LVOL,BCRGR
821691	CERCO/N7300101	N8102201	HRW	60.3	59.9	1.4	895	870	9	P-BCRGR
821692	N6754/SM7437/CERCO//N722	N8103102	HRW	61.6	61.7	3.3	950	956	8	Q-BCRGR
821693	N6754/SM7437/CERCO//N722	N8103104	HRW	62.7	62.9	2.8	955	967	4	P-BCRGR
821694	N6754/SM7437/CERCO/WA590	N8103201	HRW	61.6	61.7	2.4	945	951	6	P-BCRGR
821695	BEZ/3/NRN 10/SNG//*CNN	N8103601	HRW	60.7	61.3	1.8	920	957	6	P-BCRGR
821696	HATTON	C1017772	HRW	62.6	62.4	2.7	955	943	4	
821697	WESTON	C1017727	HRW	63.0	62.5	1.7	1025	994	3	

1/ Observed Values Corrected to 14% Moisture Basis.

5/ Particularly Promising Overall Quality Characteristics.

3/ Absorption at 14% Moisture Corrected to 11% Protein.

6/ Promising Overall Quality Characteristics.

4/ Observed Values Corrected to 11% Protein.

COMMENTS: Both Hatton and Weston were atypical in bread crumb grain (BCRGR). Experimental selections were judged accordingly.

Q = Questionable; P = Poor



NURSCO 55

LIND, WA

E. DONALDSON

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE	BABS
						<u>1/</u>		<u>1/</u>	<u>3/</u>		
821698	N7301004/N7401212	6/N8104001	HRW	64.0	67.4	0.42	78.2	11.7	62.8	2H	64.2
821699	HATTON/N7301901	6/N8104101	HRW	64.8	71.0	0.38	85.9	11.8	64.3	3H	65.3
821700	HATTON/CENTURK	6/N8104202	HRW	64.3	70.5	0.40	82.7	11.9	64.6	2H	65.7
821701	WA7003/K7101348	5/N8104301	HRW	63.2	70.4	0.41	83.6	11.7	64.0	4H	68.4
821702	CENTURK/WA6365	5/N8106701	HRW	63.5	71.4	0.38	86.7	12.4	65.6	2H	67.2
821703	ID000092/WA6365	6/N8106801	HRW	64.2	71.6	0.38	87.0	11.5	63.7	2H	65.4
821704	KAVKAZ FIELD CROSS 20	N8107601	HRW	63.2	70.9	0.40	85.0	11.7	64.1	4H	66.0
821705	KAVKAZ FIELD CROSS 43	6/N8107702	HRW	62.8	73.6	0.39	89.5	12.6	62.6	2H	65.4
821706	SPRING X WINTER SEL 321	6/N8107901	HRW	62.3	71.6	0.40	85.9	12.6	62.6	2H	64.4
821707	SPRING X WINTER SEL 321	6/N8107902	HRW	62.4	69.9	0.40	83.9	12.8	63.2	3H	65.2
821708	SPRING X WINTER SEL 321	N8107903	HRW	62.7	68.1	0.40	80.2	12.5	62.7	4H	64.4
821709	PULLMAN 2566	5/N8108103	HRW	62.8	71.7	0.36	88.0	12.2	64.5	4H	65.9
821710	PULLMAN 2568	6/N8108202	HRW	63.9	70.7	0.39	85.9	11.9	64.3	4H	66.4
821711	PULLMAN 2568	6/N8108203	HRW	63.5	71.5	0.39	86.2	11.8	65.2	5H	68.2
821712	937/101/N7223/3/WA5911	N8108301	HRW	63.6	69.3	0.39	83.4	11.2	65.0	5H	68.4
821713	9342/1T/K69//CULC/N7223/	N8108501	HRW	62.9	69.9	0.43	81.9	11.9	62.9	4H	66.5
821714	N7106043/TP-98U	N8101704	SWW	63.3	70.4	0.41	80.9	9.8	58.5	3M	
821715	CERCO/N7106074	N8101802	HWW	63.1	72.9	0.42	87.1	10.9	60.6	3H	61.7
821716	TP-98U/CARDON	N8102102	CLUB	61.6	69.7	0.42	80.9	10.8	56.5	1M	
821717	TP-98U/CARDON	N8102103	CLUB	61.3	70.3	0.42	79.7	10.9	57.5	1M	
821718	N6754/SM74437/CERCO/WA590	6/N8108601	SWW	61.0	67.5	0.44	74.5	10.6	59.2	2M	
821719	GAINES/MORO	N8108701	CLUB	62.0	71.0	0.38	84.4	10.2	60.2	4M	
821720	GAINES/MORO	N8108702	CLUB	61.5	71.2	0.41	81.9	10.3	59.5	3M	
821721	N7200052/OSAGE	5/N8108801	HWW	63.1	73.6	0.41	87.2	11.6	62.9	3H	64.7
821722	N7200052/OSAGE	N8108802	HWW	62.9	70.7	0.40	83.5	11.7	63.1	3H	63.5
821723	N7200052/OSAGE	6/N8108803	HWW	62.7	70.2	0.41	83.6	11.4	63.1	3H	63.7
821724	KAVKAZ/WA6105	N8106202	SWW	61.8	69.2	0.39	80.2	10.8	58.9	4M	
821725	MORO	C1013740	CLUB	61.0	73.1	0.41	86.6	11.1	59.8	2M	
821726	HATTON	C1017772	HRW	64.6	70.6	0.40	84.6	11.9	62.6	2H	63.2
821727	WESTON	C1017727	HRW	64.2	70.8	0.37	86.5	12.3	64.7	2H	65.2
821728	NUGAINES	C1013968	SWW	63.6	70.4	0.38	81.3	10.1	57.8	3M	

1/ Observed Values Corrected to 14% Moisture Basis.3/ Absorption at 14% Moisture corrected to 12% Protein.5/ Particularly Promising Overall Quality Characteristics.4/ Observed Values Corrected to 12% Protein.6/ Promising Overall Quality Characteristics.



NURSCO 55

LIND, WA

E. DONALDSON

LABNUM	VARIETY	IDNO	CLASS	BABSC 3/	MTIME	LVOL	LVOLC 4/	BCRGR	CODI	CODIC 4/	RMKS
821698	N7301004/N7401212	N8104001	HRW	64.5	2.6	945	964	3			P-FYELD
821699	HATTON/N7301901	N8104101	HRW	65.5	2.8	955	967	3			
821700	HATTON/CENTURK	N8104202	HRW	65.8	2.1	933	939	3			Q-FYELD
821701	WA7003/K7101348	N8104301	HRW	68.7	5.0	928	947	4			P-BCRGR
821702	CENTURK/WA6365	N8106701	HRW	66.8	2.0	1005	980	2			
821703	ID000092/WA6365	N8106801	HRW	65.9	2.3	908	939	3			
821704	KAVKAZ FIELD CROSS 20	N8107601	HRW	66.3	2.9	925	944	4			P-BCRGR
821705	KAVKAZ FIELD CROSS 43	N8107702	HRW	64.8	2.6	960	923	4			P-BCRGR
821706	SPRING X WINTER SEL 321	N8107901	HRW	63.8	2.2	970	933	2			Q-MILLING
821707	SPRING X WINTER SEL 321	N8107902	HRW	64.4	2.6	965	915	2			
821708	SPRING X WINTER SEL 321	N8107903	HRW	63.9	2.8	945	914	4			P-FYELD,BCRGR
821709	PULLMAN 2566	N8108103	HRW	65.7	3.7	1000	988	1			
821710	PULLMAN 2568	N8108202	HRW	66.5	3.4	970	976	2			
821711	PULLMAN 2568	N8108203	HRW	68.4	3.9	913	925	2			
821712	937/101/N7223/3/WA5911	N8108301	HRW	69.2	5.0	905	955	2			Q-MILLING SCC
821713	9342/1T/K69//CULC/N7223/	N8108501	HRW	66.6	4.1	970	976	2			Q-MILLING SCC
821714	N71060443/TP-98U	N8101704	SWW						8.15	7.91	Q-MILLING&COL
821715	CERCO/N7106074	N8101802	HWW	62.8	2.6	940	1008	6			P-BCRGR
821716	TP-98U/CARDON	N8102102	CLUB						8.89	8.80	P-MILLING
821717	TP-98U/CARDON	N8102103	CLUB						8.72	8.65	P-MILLING
821718	N6754/SM74437/CERCO/WA590	N8108601	SWW								
821719	GAINES/MORO	N8108701	CLUB								P-MILLING
821720	GAINES/MORO	N8108702	CLUB								Q-MILLING
821721	N7200052/OSAGE	N8108801	HWW	65.1	3.2	950	975	2			
821722	N7200052/OSAGE	N8108802	HWW	63.8	3.3	960	979	3			Q-FYELD&BCRGR
821723	N7200052/OSAGE	N8108803	HWW	64.3	3.0	910	947	2			
821724	KAVKAZ/WA6105	N8106202	SWW						8.62	8.49	P-FYELD
821725	MORO	C1013740	CLUB						8.62	8.54	
821726	HATTON	C1017772	HRW	63.3	2.2	905	911	2			
821727	WESTON	C1017727	HRW	64.9	2.0	965	946	2			
821728	NUGAINES	C1013968	SWW						8.51	8.29	

COMMENTS: Note: There are several soft white and hard white selections in this hard red winter nursery.

P = Poor; Q = Questionable





## ADVANCED HARD RED WINTER III DRY EARLY

NURSCO 56

LIND, WA

E. DONALDSON

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE
						<u>1/</u>		<u>1/</u>	<u>3/</u>	
821729	TX65A1626/KN700340	<u>6/</u> N8104703	HRW	61.7	70.5	0.37	85.6	11.3	61.2	6M
821730	CERCO/SPRAGUE	N8105201	HRW	63.0	70.4	0.37	85.6	12.4	61.3	2H
821731	PULLMAN 2567	N8101304	HRW	61.2	70.8	0.38	85.9	11.7	59.8	4H
821732	PULLMAN 2567	N8101305	HRW	61.7	71.3	0.38	86.9	11.7	60.2	4H
821733	N700134/K69//SM7436/MC/H	N8105901	HRW	62.5	74.7	0.36	93.0	11.0	59.1	4M
821734	PULLMAN 2572	<u>6/</u> N8106101	HRW	61.5	71.4	0.40	85.2	11.5	61.1	4H
821735	HATTON	C1017772	HRW	63.7	71.6	0.37	87.6	11.5	61.6	4H
821736	WESTON	C1017727	HRW	63.6	71.9	0.38	87.8	11.7	61.6	2H

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR	RMKS
					<u>3/</u>			<u>4/</u>		
821729	TX65A1626/KN700340	N8104703	HRW	63.2	63.9	3.3	985	1028	2	
821730	CERCO/SPRAGUE	N8105201	HRW	62.9	62.5	2.2	1080	1055	2	
821731	PULLMAN 2567	N8101304	HRW	62.7	63.0	3.4	905	924	8 P-LVOL,BCRGR	
821732	PULLMAN 2567	N8101305	HRW	63.6	63.9	3.3	930	949	5 P-LVOL,BCRGR	
821733	N700134/K69//SM7436/MC/H	N8105901	HRW	61.3	62.3	3.2	905	967	4 Q-LVOL,BCRGR	
821734	PULLMAN 2572	N8106101	HRW	61.8	62.3	4.0	1035	1066	2	
821735	HATTON	C1017772	HRW	64.3	64.8	2.8	975	1006	4	
821736	WESTON	C1017727	HRW	65.5	65.8	1.7	1055	1074	2	

1/ Observed Values Corrected to 14% Moisture Basis.5/ Particularly Promising Overall Quality Characteristics.3/ Absorption at 14% Moisture Corrected to 12% Protein.6/ Promising Overall Quality Characteristics.4/ Observed Values Corrected to 12% Protein.

COMMENTS: None





CANADIAN SOFT SPRING WHEAT

NURSCO 57

CANADA

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE
821737	CANADIAN SOFT WHITE WINTER WHEAT		SWS	62.6	69.2	1/ 0.40	80.7	1/ 8.8	3/ 53.3	2M
LABNUM	VARIETY	IDNO	CLASS	CODI	CODIC	CAVOL	SCSOR	WTIN	NOSCO	RMKS
821737	CANADIAN SOFT WHITE WINTER WHEAT		SWS	8.74	8.72	4/ 1205	67.0	392	81	

1/ Observed Values Corrected to 14% Moisture Basis. 5/ Particularly Promising Overall Quality Characteristics.  
 3/ Absorption at 14% Moisture Corrected to 9% Protein. 6/ Promising Overall Quality Characteristics.  
 4/ Observed Values Corrected to 9% Protein.

COMMENTS: This sample of Canadian soft white spring wheat was evaluated at the request of the USDA, ASCS, KCCO, Portland, OR. The sample was low in flour yield (FYELD) and Japanese Sponge Cake score (SCSOR), but very good in noodle yield (WTIN) and overall noodle score (NUSCRO).









